

COSTA RICA

COUNTRY PROFILE

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I. Overview

The Universidad Nacional (National University) in Heredia provides teacher training in its Division of Basic Education, Centro de Investigación y Docencia en Educación (Center for Educational Research or CIDE). Courses on the teaching of reading are not given individually. Reading and writing go together as a required course for anyone beginning to study elementary education. The course emphasizes the concepts of language-society, language-thought, and language-school. It is both theoretical and practical, and is taught with an historical perspective. Much of the discussion on educational methodology is referred to as a form of constructivism. Though there is no clear indication of whether the method is primarily discovery/inquiry learning or guided constructivism, the practical method in pre-service uses an “innovative” intervention in the classroom. Trainees design their interventions by finding out what it is that prevents children in a public school from learning how to read.

For years the trend was to focus on preschool and the first cycles (first to third grades) in the teaching of reading. Teachers in the second cycle ignored its importance and did not reinforce reading skills. Concerned by this trend, the university modeled a new approach to teaching teachers reading readiness by taking Honduras’s motivational program, *Salvemos el Primer Grado* (Let’s Save First Grade). The new orientation was towards the use of whole language and constructivism. The object was to gain skills in order to teach children how to decode messages and acquire a rudimentary level of reading comprehension using simple texts. The Central American Congress for Reading, which is similar to the International Reading Association, organized many teacher in-service trainings that focused on the use of whole language or child-centered methodologies.

However, university officials are aware that the new methodology is seldom applied in the real world. They fear that syllable learning (i.e., la, le, li, lo, lu) is still pervasive. They are also aware that even though teachers are excited and happy after workshops in new reading methodologies, they often do not apply it because it takes too much time to prepare new lessons. Teachers have been slow to understand that using these new skills will facilitate the academic process and mitigate discipline problems.

This assessment was confirmed by a visit to a rural school that allowed the observer to witness that the teacher in first grade did not use any of the new methodologies in her approach to teaching reading. If anything, her method was empirical behaviorism. In other words, from the teacher’s perspective, learning had to come as a result of repeated behavior. She wrote consonants and vowels, then words with those consonants and vowels, and asked students to copy them down. Afterwards, all of the children repeated in unison the words written on the blackboard. There was no explanation of the words, and children were not asked to participate in their learning by being asked about their assumptions about the words on the board. There was also no dialogue between children and teacher, and a majority of the children were disorderly.

On the other hand, in an urban school singled out as a School of Excellence by the Ministry of Education, a first grade teacher with an equal amount of children in her classroom did have a dialogue with her students. Her approach was a combination of discovery/inquiry learning and guided constructivism. When teaching the word “eagle,” for example, the teacher engaged her students in discussions that encouraged them to think about the origin, color, and other pertinent data about the eagle. Most of the children were given an opportunity to speak out. This interactive exercise fully allowed the children to participate and discover concepts through generalizations. The classroom was also free of disorder.

The Universidad Estatal de Educación a Distancia (University of Distance Learning or UNED) has recently dealt with the reading comprehension problem in elementary grades by asking a reading specialist, Rosemary Hernandez, to write a new text (a copy of which was obtained for further study). University officials said teachers were trained in its use, and it was assumed that all teachers would have the text in their classrooms. The observer did not see this particular text during the visit to the school in Heredia. The teacher used no text, and no reading books were seen anywhere in the classroom. One can assume that not all teachers in rural areas are applying new teaching methodologies, even if they have been trained to use them.

The best practices so far initiated in Costa Rica have been the laboratory school programs at the University of Costa Rica. Student teachers who participate in the program are taught how to measure reading comprehension themselves, since teachers already in service are not subject to any formal reading evaluations. Current statistics on student reading levels are dubious because students often “read” by repeating words by rote, rather than reasoning deductively.

The Netherlands has funded a project called SIMED, which for the last seven years has organized teachers in circles of learning to further develop reading readiness.

The Costa Rican Constitution stipulates that every child has the right to attend school from ages five to fifteen, by which point he or she should have finished the elementary cycle (ending in sixth grade).

According to educational indicators provided by the Ministry of Education for the year 2001, there are 89,207 pre-kinder students, 565,270 elementary students, 311,275 high school students and 5,721 special education students.

In terms of academic level, 90.6 percent of students finished their elementary studies, and 82.7 percent finished high school.

Of those students who did not finish all of the elementary grades, 86.2 percent finished up to fifth grade. These statistics point to a rather high passing level in comparison with the rest of Central America. There is a smaller percentage of students that repeat grades or fail.

In the elementary grades, 9.4 percent of students failed and 8.2 percent repeated a grade more than once. And for many other scholastic and non-scholastic reasons, 4.1 percent of students dropped out of school in the elementary grades. As is discussed in the Panama report, the incidence of children dropping out of school because of socioeconomic reasons is pervasive in rural and urban marginal areas throughout Central America. Parents often take their children out of school to go to work in the fields or in the streets.

The national literacy rate of those older than 10 years of age is 95.2 percent. In the adult population, 10.4 percent did not receive any schooling, 52.8 percent finished the elementary grades, 25.1 percent finished high school and 11.7 percent finished the university.

There are 2,174 public pre-kinder schools (85.2 percent of all pre-kinder schools) and 3,860 public elementary schools (93.2 percent of all elementary schools) in Costa Rica.

According to a UNDP study called *The State of the Nation*, 83.3 percent of elementary school students passed their grade in 2001. This represents an increase of 3.4 percent over the passing rate in 1999. The dropout rate also improved slightly over its 1999 level of 4.4 percent.

In 1999, half of the student population received instruction in English, and 52 percent of the student population was enrolled in computer courses at the primary level.

With this in mind, it is interesting to note that the field visit to the urban School of Excellence, Escuela Buenaventura, revealed a computer lab dedicated to children in first grade. The instructor demonstrated a software program designed by the Ministry of Education that discussed the characteristics of a frog in a very interactive manner. There were 30 students in the lab—two students per computer—and all seemed to enjoy the program immensely.

On the other hand, in the rural school visited, there were no computers and no school library. The classroom visited had just finished studying English and all of the children in chorus said “Good Morning.”

The Ministry of Education conducts three national tests for students in the school system. The first is given to students at the end of the second cycle of primary education, at sixth grade. The second is given to students at the end of the ninth grade. The final national test is provided to students at the end of the 11th grade (the equivalent of the junior year of high school). Thus, Costa Rica applies more testing to students than other countries visited (Panama, for example, conducts only the pre-university tests, and the Dominican Republic conducts only eighth-grade tests). Waiting until the sixth grade in Costa Rica does seem, however, to be too late for initial testing of student achievement in the early grades.

We were unable to obtain a published analysis of the results of the national tests, nor the results of the latest tests. Ministry officials interviewed seemed satisfied with the results

obtained. But Costa Rican third and fourth grade students earned below average scores on the standards tests applied by the UNESCO Educational Laboratory in 15 Latin American countries (as did their peers in other Central American countries).

Formal testing within the classroom takes place once every quarter, and starting at the second cycle, formal end-of-grade exams are applied. Interviews with teachers led researchers to infer that classroom texts and exams measure mainly memorization of content rather than the development of reasoning and analytical skills.

Costa Rica has experienced a significant increase in immigration. As such, the education system has been flooded with students with disparate levels of educational need coming from as far away as Colombia and as close as Nicaragua. Costa Rican law protects all foreigners as long as they are on Costa Rican soil and gives them the constitutional right to the same free education accorded nationals.

The problem that this openness brings into the education system is that most of these children are older than their peers. Thirteen-, fourteen-, and fifteen-year-old children are frequently placed in a special program in order to avoid embarrassment and alienation. However, there is no special reading program for them, even though they are at a disadvantage when compared to younger children.

In 1999, the UNDP, in its program State of the Nation, developed a text called *Population, Development and Migration*, which targeted high school students. Though it is not a reading text, the program does address the problem of migration in an interactive and creative manner, and features activities that develop reading comprehension.

Perhaps because there is 100 percent access to schools, Costa Rican parents are very aware of the need to interact with schools and their children. Nothing is done, however, to compete with Nintendo and other such distractions. Books and literature have been left behind, and there is a tendency to think that they will never regain significant popularity among children.

Certain specific programs have been very successful in promoting parent and community involvement. A case in point is the Peace Corps project, Teaching Children and Strengthening Academic Performance and Psychosocial Relations in Children of First Grade. The project was borne as a response to the need to offer an inter-institutional solution to the problem of failing first grade students in the district of Paso Canoas. The problem of repetition is also common at the national level. It affects many students year after year with severe social repercussions, leading to desertion, delinquency and street living.

The idea of the Peace Corps project was to identify first graders at risk for failure and offer them academic support and social follow-up through a group of peer tutors trained by Peace Corps volunteers. The project took place between March and December of 1999. Two public schools—Escuela Lider de Paso Canoas y la Escuela Confraternidad de Barrio San Jorge—and one private school—Colegio Técnico Profesional de

Corredores—participated in the program. Partnering institutions included: el Patronato Nacional de la Infancia (PANI); Oficina Local de Corredores; el Ministerio de Salud Publica (MSP) de Paso Canoas; el Equipo Básico de Atención Integral de Salud (EBAIS) de Paso Canoas; el Instituto de Alcoholismo y Farmacodependencia (IAFA) de Perez Zeledon; and Hogares CREA Corredores.

Direct beneficiaries of this program included 28 youths that served as tutors for the target population, 16 first grade children at the Escuela Lider de Pasos Canoas and 25 students of the Confraternidad de San Jorge. The program also indirectly impacted five first grade teachers, 41 parents of repeating students and 135 first grade children who participated in meetings with teachers and parents and short seminars in human development.

The UNA Foundation established an agreement with the Ministry of Education to use its Centers of Statistics and Data (CEINAL) to reach parents of children with poor grades and low educational abilities. The program, which focused on marginal urban areas, completed 198 courses for parents. The workshops were called *Somos Parte de la Escuela* (We Are Part of the School), and included the involvement of local schoolteachers. A training-of-trainers was offered first, and then teachers imparted their newly learned skills to the remaining teachers in the school. Ultimately all the teachers formed training groups with parents.

No significant legal change has arisen from previous government attempts to reform the education system. Still, it has been said that hands-on reform of people's attitudes and perceptions about education is ongoing.

Before this sort of reform began ten years ago, teachers were revered and considered professionals. When population growth demanded more schools, the system was forced to expand hastily. All of a sudden there were not enough resources and insufficient infrastructure. Class hours had to be reduced, and the curriculum suffered.

The establishment of the Omar Dengo Foundation and its push for technology in education stimulated reforms. As has been already mentioned, 58.6 percent of the student population is involved in computer learning and 53 percent have learned English as a second language. Math instruction has been strengthening and a general awareness of reading readiness has taken hold. According to the Minister of Education, there is a national effort to strengthen reading habits and improve learning practices.

There are two IDB loans in operation in Costa Rica's education sector—a \$28 million Basic Education Quality Improvement loan that was approved in 1991, and another \$28 million loan for preschool education and third-cycle teaching improvement that dates back to 1997. It has taken the government ten years to implement the first program. The main obstacle to efficient implementation, according to IDB officials, has been the government's slow procurement process. As virtually the sole provider of education and health services, the government struggles to competently provide social services to a growing population. The government has made considerable investments in infrastructure, both physical and technological, but is less and less able to maintain it in

proper working order. In addition, teacher absenteeism is rampant in schools, and little is done to evaluate teacher performance. One interviewee contended that failure and repetition rates are increasing every year.

School administrators and teachers feel that the overall quality of education in their country is good, better than the rest of Central America. But, many Ministry officials, university teachers and private-sector employees argue that it could be better. All agree that there is a pervasive tendency among teachers to be complacent. There is no argument about salaries or benefits as a whole. There is a general sense of displeasure with current conditions because everyone seems to believe that more could be achieved. The majority of teachers still feel that in-service teacher training needs to improve, especially in new teaching methodologies.

Central American ministers have agreed that one way to strengthen education is by demanding that all teachers be university graduates. Therefore, there are many programs being implemented to offer teachers at all socioeconomic levels opportunities to study for university-level degrees.

The UNDP has identified six indicators that can be used to assess the quality of education. Below is a synopsis of Costa Rica's performance in light of these standards:

- The number of elementary teachers with advanced degrees

Analysts feel that there has been some advancement. The number of *empiricos* (teachers with no formal training) has diminished. There has been an increase in university-educated teachers and a rise in salaries. Salaries are still low, but rank higher in Costa Rica than in the rest of Central America. Teachers still are afforded relatively low social status, and do not often seek additional training. Though the Ministry talks about continuous training, there is no clarity about how it will be done.

- The quality of infrastructure

Schools in rural areas are still suffering. The real problem is a lack of desks. The government has allocated some funds to ease the problem, but the investment has been inadequate. There is a wedge between public and private schools, between the higher-income and lower-income students.

- Class size

There are 30 to 35 children per classroom in the urban areas. Rural schools have a lower average. Immigration has shifted population demographics.

- The quality and breadth of the national curriculum

There are no exams until sixth grade. There are deficiencies in math and language, primarily reading comprehension. Even so, the elementary grades fare better than high school in relation to international standards.

Most schools have no time devoted to art, music or physical education. Schools that do offer the arts do so for half an hour to an hour per week.

Textbooks have been revamped, but it is not known how they are being applied or if they are being used at all.

- **Teacher performance**

There are supervisors and advisors that evaluate schools, but there is no evaluation or observation of individual teachers. Supervisors and advisors are too bogged down with administrative tasks to have time for classroom observation.

- **Technological connectivity**

The country is a pioneer in Central America. There is almost complete coverage in the urban marginal areas, but little in the rural areas. Teachers have been computer trained. Through the assistance of the Omar Dengo Foundation, 50 percent of teachers have been covered. Also, the generation of students that will graduate in 2010 will be the first that began English in the elementary grades.

The National Library is in the process of being remodeled and has been closed for months. There are agreements with international donors to promote reading. Since the nineties, the Netherlands has been heavily involved in promoting the use of libraries. Spain has also been instrumental in supporting libraries. The Ministry of Culture began to motivate the general populace in reading by spearheading an homage to Miguel Cervantes Saavedra. Public booths featuring information and bibliographies have been installed in an effort to stimulate teacher, parent and child interest in reading.

The local newspaper, *La Nación*, has published articles that promote reading, such as *La Nacion en El Aula* (The Nation in the Classroom). Community libraries have promoted a mobile train that comes by with activities for children. Most such efforts have been small, and there is no comprehensive plan to coordinate them.

Generally, libraries in the rural areas have few resources and limited reach. Usually, they are not up to date.

II. Teacher Training Needs

Pre-service training of teachers in Costa Rica is the responsibility of universities. Costa Rica has discontinued the sort of traditional normal schools that still exist in other Latin American countries. Three of the four state universities in the country offer pre-service training programs. These are: the National University (UNA), the University of Costa

Rica (UCR) and the State University of Distance Education (UNED). In addition, there are over 40 private universities in the country, several of which offer concentrations in education. The National Higher Education Council (CONEP) is the accrediting institution for private universities. In Costa Rica, public universities enjoy much higher academic prestige than private universities; they are also bigger and can offer more resources to their students. As is the case in other countries of the region, the teachers of Costa Rica have been encouraged to upgrade their qualifications by pursuing university-level teaching certification courses and degrees. This policy has given universities a large teacher clientele seeking such credentials—at present a majority of the professors at the faculties of education are serving teachers.

All three universities offer courses leading to three levels of qualifications: teaching diploma, pedagogical bachelor's and master's degree. The diploma is normally completed in two years and includes a mix of pedagogy and teaching practice. The bachelor's degree takes two years following the completion of the diploma and focuses on knowledge of subject matter and further pedagogical content. The master's degree takes one and a half years beyond the bachelor's, and includes in-depth studies in pedagogical theory and the completion of a thesis based on original research.

All three universities have a long history in the preparation of teachers. The UNA is the successor of the largest normal school that had operated since the early 1900s. UCR has a similarly long history within the country as the largest and most distinguished university. The newest of the schools, UNED, dates back to the early 1980s.

The School of Education of UNED has a teacher training student body of over 4,000, by far the largest of the three schools. UNED uses the distance education teaching modality, which relies heavily on written texts and students' independent work. Students are enrolled from towns throughout the country. For each course in which students enroll, they receive a textbook and other learning materials. They can receive face-to-face support from tutors located at 30 university centers around the country or they can make inquiries through correspondence or email. Students take written tests given by UNED professors on a quarterly basis at various locations. UNED is developing plans for introducing ICT in its teaching work, including extending the use of the videoconference facilities and learning software.

The Faculty of Education of UCR and the Center for Research and Training in Education of UNA conduct traditional face-to-face pre-service training. Like UNED, the majority of students at both universities are practicing teachers but, unlike UNED, UCR and UNA appear to take a fairly traditional approach to teacher training (see discussion on course curricula below). Particularly disappointing was UCR, which seemed more fixed on a traditional academic curriculum and teaching approach. Interestingly enough, UCR course curriculum dates back to 1997 (i.e., it precedes the curriculum reform process undertaken by the Ministry of Education). UNA, at least, is contributing to curriculum transformation in rural schools and gearing teacher training to the curriculum.

As is the case throughout Central America, Costa Rican universities do not focus specifically on reading in an individual course within the curriculum. The subject of reading is more directly dealt with in the course, Reading and Writing Teaching Methods, which is present in all the study programs of all three universities. All three universities offer this course in two levels over a period of two quarters and during the first two years of study (i.e., *profesorado* or diploma level). In addition, a number of other subjects include content that is relevant to reading development, for example: children's literature for I and II cycles (UNA, UCR, UNED), teaching resources (UNA, UCR), pedagogical construction in the classroom (UNA), Spanish didactics for basic education (UNA), written expression and the teacher (UCR), applied arts in education (UCR) and verbal and written communication (UNED).

The universities' training professors claim independence from MOE in deciding their course curriculum. However, the Ministry is responsible for issuing the school curriculum, which gives the lead to the universities regarding the content of their teacher training courses.

All universities require at least one full quarter term of teaching practice. In addition, several courses require practical work to be conducted in schools. For example, a student taking Reading and Writing Teaching Methods is normally required to practice the methods learned in a classroom setting under the guidance of an experienced classroom teacher or a university professor. It is also common for students pursuing the master's degree to participate in group research projects that require data gathering under the guidance of a university professor.

In-service training is not obligatory for Costa Rican teachers, but as the national curriculum changes, many teachers feel that they need additional training in order to keep up. Many programs have been developed to satisfy this demand.

Schools with only one teacher (multi-grade schools) comprise 40 percent of the schools in the country. To serve them, the National University developed the Integral Program To Improve Schools With Only One Teacher, which includes an in-service training program for teachers without degrees. All participants receive training in the new study programs, educational policies, didactic planning and new methodologies for one-teacher schools (*escuelas unidocentes*).

Training is coordinated by the Ministry of Education. Many of the universities discussed above have also developed programs for in-service training. The National University (UNA) claims to be the only university to reach teachers in rural areas and provide a certificate (*diplomado*). A *diplomado* is more than a one-day workshop; it usually requires several sessions spread out over a period of weeks. Methodologies include face-to-face and distance training, using computers and videoconferencing.

UNA training generally occurs every 15 days, and involves courses on Friday evening and all day Saturday. Trainings occur in such sites as data centers or local schools. Most of the in-service training relates to the requirements of a degree. If training is to provide requirements of a career degree, a teacher has to take 40 hours of instruction and pay \$10 a course. For each session they attend, teachers obtain points that go towards those needed for a given degree.

UNED is the largest distance learning institution in the country. Though it does some pre-service training, the core of its work is in-service training. UNED tries to salvage teachers who were in private universities—not generally known for academic excellence. (There are more than 40 private universities.) All of UNED's in-service training is coordinated with the Ministry of Education. Courses are imparted via the use of texts and diskettes with music and activities to be used with children. There are also occasional videoconferences. The program offers participants reviews of their written work and face-to-face or telephone tutoring. Though these teachers do not have bachelor's degrees, they are kept in the system because there is a shortage of teachers.

In other cases, teachers take in-service courses not for academic degrees, but in order to obtain credits and be able to move to a school or position of their choice. Most teachers doing this go to workshops during their vacation time, in December and January. The in-service training during this time consists of two weeks of all-day workshops.

There is some in-service training directly related to reading. UNA offers two courses in reading and writing in which teachers work in small learning circles. Teachers have to pay for the bibliography used in the course.

The training done by the Centro Nacional Pedagógico (National Center of Pedagogy) and the Ministry of Education is free. The budget comes from a World Bank project called PROMECE that seeks to improve the standards of teaching in the country. The Centro Nacional Pedagógico, which is part of the Ministry of Education, offers in-service training for certificates, not degrees. The center works closely with universities like UNA, which does training for indigenous and rural teachers.

Teachers asked about in-service training programs said that the general quality was fair, but that they preferred to prepare on their own because they would rather not pay for a course or use their weekends for work. They are frustrated about being forced to attend school 200 days out of the year. They also do not like to participate in courses over the radio. They prefer video courses that can be played on television sets.

Comments on in-service training from university administrators differed significantly from teachers' comments. Administrators felt that teachers were too soft and were unconcerned about learning to better their classroom performance. Teachers felt that they needed training and welcomed it, but preferred not to use their weekends.

The Global Alliance for International Education is trying to establish standards for education in order to accredit universities so that they can offer distance learning. There

has been talk of creating a teacher training center using some of the technology offered by the Instituto Tecnológico de Monterrey in Mexico, which is considered by Costa Ricans to be the leading distance training institution in Latin America.

The education system of Costa Rica faces the challenge of translating its innovative theoretical plans into techniques that touch the everyday lives of children in the classroom. The massive pre-service programs of the public universities of the past decade were mainly geared to provide academic accreditation to the serving teachers and not specifically geared toward improving classroom instruction. Now that 85 percent of teachers (according to the Ministry) have completed their university education, it is important to embark on an in-service training and technical supervision effort that will help teachers apply more effective teaching approaches. It is also evident that universities do not have much expertise in reading development; consequently, there has not been much focus on improving this crucial component of primary education. Costa Rica will need this type of assistance from the Center of Excellence.

It is hard to assess the quality of in-service training, since it is usually approached not as a result of a direct need from teachers, but for a given credit or for a degree. In-service training can be seen as essentially an extension of pre-service education. The assumption is that, while they are already teaching, teachers can slowly obtain the skills development that they missed during pre-training. There are no specific training sessions unless there is some international presentation or an author such as Rosemary Hernandez writes a book in reading and teachers are trained in its use.

Among the most critical training lacks that could be addressed by Center of Excellence in Costa Rica are: basic elements of teaching reading readiness, including the use of technology and the development of university-level reading specialists; strategies for remedial reading programs; better-developed training methodology for in-service workshops; better computer-based training; an emphasis on child-centered methodologies in pre-kinder and primary levels; better-developed management of library resources; tools for motivating children to participate actively and to read; a focus on systematic evaluation of children's reading competency; the institutionalization of reading corners; the use of the seven intelligences in the classroom as proposed by Howard Gardner; a conscious approach to teaching children with learning disabilities; and the promotion of leadership, creativity, and innovation.

III. Institutional Profiles

FOD (Fundación Omar Dengo/Omar Dengo Foundation)

Fundación Omar Dengo is the leading institution in the application of ICT to strengthening educational quality and learning in the classroom. To a large extent, FOD can be seen as a pioneer of the kind of work methodology proposed for the Center of Excellence, as it is directly impacting the quality of teaching at classroom level. FOD technical expertise in education technology and its 14 years of experience in teacher training could be invaluable in the design and implementation of the Central American

Center of Excellence. It is important to note that the quality of the Foundation program and its leadership was widely acknowledged by Costa Rican educators and by several Panamanian interviewees. FOD has been called upon to provide technical assistance to programs in several LAC countries, recent examples being Chile and Ecuador.

The foundation was founded in 1987 by a group of Costa Rican intellectuals and business leaders to contribute to the strengthening of the education system in the country. Currently, it has a long list of national and international contributors, notably the Costa Rica Central Bank (through a debt swap arrangement), the banking sector, CRUSA, and US technology companies. Motorola has recently donated a large piece of real estate, on which FOD intends to build a training center. The FOD is led by a formidable team of education and technology professionals with graduate degrees from the U.S., headed by Dr. Clotilde Fonseca. The FOD team acknowledges as its mentor the Massachusetts Institute of Technology (MIT), particularly Professor Seymour Papert of the Learning and Epistemology Group, with whom it has maintained an active partnership since the late 1980s. FOD also has a longstanding relationship with EDC and AED. The Foundation is a subcontractor to EDC in the dotcom contract recently awarded by USAID/Washington. It is also the Costa Rican affiliate of PREAL.

Two closely related programs of FOD are of special relevance to this report—the Red Telemática Educativa (ICT Educational Network) and the Programa de Informática Educativa. The Red Telemática Educativa is a telecommunications initiative aimed at improving Costa Rican schools. This project, which works in conjunction with FOD's ICT educational program, creates a network of communication to promote innovation through interaction between members of the educational system of Costa Rica. Members can develop projects and access information through the network. The project also focuses on connectivity and providing email, chat, videoconferencing, search engines and the publication of educational productions. Also included in the network is an educational e-magazine called *Nuevo Milenio*, which was created through the collaboration between a university and five schools.

The ICT educational program of the FOD, which was developed in 1988 in cooperation with the Ministry of Education, builds computer labs at public schools with underprivileged students. Computers have been installed at 494 of these schools to date, and the total is expected to reach 540 in 2002. Technology training and conferences for teachers are also offered as part of the program. Seven hundred and fifty teacher tutors specially trained and supervised by FOD technicians administer the program at the school level. To date, over 254,000 school children (more than 50 percent of the school-aged population) and close to 15,000 teachers have benefited from the program. The program currently utilizes diverse levels of connectivity available in Costa Rica. The basic commuted connectivity telephone/modem is used at 180 schools. ADSL is being gradually introduced in schools through a CISCO Corporation donation; to date, 35 schools have obtained this system. Dedicated lines and SDN with voice and data capability are being introduced through EDUNET, the MOE's school connectivity program. To date, 25 schools have accessed this system, and 55 are in the process of implementing the program.

UNED (Universidad Estatal de Educación a Distancia/State University for Distance Education)

UNED is the primary university that prepares students to become teachers, as it reaches a vast number of teachers in rural areas. In 1999, the university had 4,986 students, of whom 68.3 percent were women. The disciplines imparted at UNED are business administration, education, and protection and management of the environment. With 25 years of experience in distance education, the university has established expertise in pre- and in-service teacher training. Though it offers other disciplines, education is UNED's main focus.

The university uses computers, interactive videoconferencing, and texts in teacher groups as training modalities. The university has five buildings. Aside from the administrative building (which houses an AS/400 computer for registering students), there is another building which houses the major technological warehouse. The third building is used for classrooms and conferences. The fourth is a publishing complex, and the last houses the radio station, closed circuit television, videoconferencing rooms, video library, two major editing rooms with highly sophisticated Sony equipment valued at US \$800,000 and a software design department.

The university is connected by fiberoptic cable wire in a LAN/WAN network, which enables the project to connect to rural areas. The second building that houses the major wiring has state-of-the-art wide-band receivers, and transmission is made at a speed of 100 Mbps between switches. Everyone throughout the university is connected via Intranet and can email each other. This cable platform follows the standards of the Electronic Industries Association and the Telecommunications Industries Association.

In its distance learning methodology, the university reaches students at 12 centers throughout the country. They use telephone lines for email communication between students and teachers. Four of the 12 centers have virtual classrooms, which means that they receive the class via videoconferencing (VLANS). Each classroom has the capacity for 24 students. And each center can seat 300 students for a live conference (recently they listened to a Howard Gardner presentation from the U.S. and discussed the subject with peers in Spain and Venezuela). These facilities offer the convenience of being able to connect with other centers such as the Social Security Organization, the ICA and the National Center for High Technology.

The university has 12 servers in basic service, four of which have university access. There are several database search engines, Oracle being one of them. The system has the capacity to receive 600 students on-line, and there is room for more growth.

Nearly 70 percent of students can be reached by computers. The university has a three-year stock of repairs and accessories. Its equipment is overhauled every six months. All machines are Pentium IIIs. The university is able to design software and often export

software programs to other Central American countries. Its staff members have also begun to design electronic books and are working on virtual laboratories.

At one time the university had wanted to buy out Channel XIII, the educational television channel, but decided not to do so because the network handled radio, television and newspaper production, which would have made a buyout too costly. Instead, it has formed an agreement whereby Channel XIII broadcasts educational programs designed for student teachers in the country.

INCAE (Instituto Centroamericano de Administración de Empresas/Central American Institute for Business Administration)

INCAE is known more for teaching young aspiring and established entrepreneurs than for training teachers. That is soon to change. Rather than continue the traditional pre- or in-service teaching, the university wants to explore the concept of leadership among teachers and to approach education as a constantly changing market variable. The idea is to stimulate creativity and capacity and to transform thinking. Stemming from Dr. Seymour Papert's thesis that "the only competitive skill is the skill of learning" (presentation at seminar on creativity and competitiveness for sustainable development in August 2001 at INCAE), the university has created a project called Centro Latinoamericano para la Competitividad y el Desarrollo Sostenible/Latin American Center for Competitiveness and Sustainable Development (CLACDS). The program, which is still in the planning stages, is focused on engaging primary school teachers in leadership and making them true agents of change.

With the assistance of the Harvard Institute for International Development, INCAE is preparing to launch the Central American Agenda for the Twenty-first Century. Within CLADS, there will be clusters—geographic concentrations of interrelated businesses, specialized suppliers, service providers, public institutions and private associations—in different fields of competition and cooperation. Its purpose is to facilitate and become a catalyst for academic institutions and political leaders to promote competitiveness and sustainable development.

CLADS officers spoke of the Center of Excellence as being the ideal vehicle to promote theories of change, educate future educators with a new vision of the future, take on new challenges and develop innovations that will keep the region competitive. To them, CLADS would be an ideal site, since agreements have already been reached with all the governments of the region and INCAE was already known for its academic excellence.

UNA (Universidad Nacional/National University)

There are about 10,200 students enrolled during the current term at UNA. Within CIDE (Centro de Investigación y Docencia en Educación/Education Research and Teaching Center), there are 566 enrolled this term. About 200 students graduate each year from CIDE.

UNA is a successor to the Escuela Normal Superior, which trained primary school teachers for over 50 years. Thus UNA has the longest tradition in teacher training in the country. Through its division of rural education, UNA is the country's leading provider of teacher training for rural schools. Rural teachers can obtain their degrees through a mix of distance and face-to-face instruction. Rural teachers attend classes twice a month on Fridays and Saturdays, and carry out practical assignments in the intervening periods

CIDE students learn reading-related subjects in the following courses: reading and writing, children's literature I and II cycles, teaching resources for I and II cycles, Spanish teaching in basic education I, contemporary focus on reading and writing, and educational projects in the classroom. The director of the rural education division, María Eugenia Monge, appears to be the principal reading specialist at UNA. She is an active participant in the Latin American network of reading specialists and in the Latin American Reading and Writing Congress.

Like other public Costa Rican universities, UNA is an autonomous entity that is independent of government control. The Ministry contracts UNA's services for teacher training courses and research projects. The university also participates in educational policy working and consultative groups convened by the Ministry. UNA is the country's leader in curriculum reform and teacher training for rural areas.

Universidad Nacional does not have a specific reading program. The subject of reading is dealt with mainly in courses on didactics of reading and writing, and Spanish teaching methods. Creativity development Professor Cecilia Balmaceda, the coordinator of primary education, is responsible for the area of reading teaching. Professor Rosemary Hernández is cited as the university's main specialist in reading.

As is discussed above, the majority of the students in the regular education courses are active teachers seeking basic or advanced professional qualification and higher education degrees. In addition, the Universidad Nacional has considerable experience in in-service training of teachers through non-degree courses. These courses are organized by the extension department and taught by School of Education and other guest faculty. Its in-service teacher training courses are developed either as a result of a cooperative agreement with the Ministry or as a result of the university's own perception of need.

The Government of Costa Rica covers 60 percent of the university's operating costs. The remainder of the cost is covered by student fees, sales of books, and the sale of services.

There is a great deal of interest among administrators in the Centers of Excellence initiative.

Fundación UNA

The Foundation for Science Art and Culture of the Universidad Nacional (La Fundación UNA) is a private non-profit organization established in 1982. Its main purpose is to assist the Universidad Nacional in strengthening the advance of the arts, science and

culture, but in practice it also completes projects that the university cannot. Every program managed by the Fundación UNA is funded by local and international organizations and individual donors, and aims only to support academic development in the Universidad Nacional. Among Fundación UNA's international supporters are the Link Americas Foundation (LAF) and the California Post-secondary Education Foundation. LAF assisted the foundation in fundraising and in a joint venture with SUN Microsystems—one of the world's largest companies in technological innovation. The first proposal generated by the partnership was designed to install a digital contents doorway (portal) on the Web. The foundation negotiated a contract with MOE in order to teach 70 courses to primary school teachers in the first semester of 2001.

The Foundation has an agreement with the National University to conduct teacher in-service training in the use of technology as an educational tool. All courses are taught via computers. They have had quite a bit of success for the past four years. Courses are taught via the Internet. The Foundation has a large room where teachers log on to the network and communicate with students in the field. All the computers, donated by SUN, appear to be new. In-service technology teaching has been going on for four years.

Universidad de Costa Rica (UCR)

The Universidad de Costa Rica (UCR) has a total faculty of approximately 4,300. Four hundred and twenty students are enrolled in the primary school section this term. From the primary school section, 50 to 60 graduate from the diploma course (*profesorado*), and 30 to 40 graduate from the bachelor's course per year. The primary school section of the faculty of education has seven full-time tenured professors, and five interim professors.

UCR is the largest and most prestigious of the Costa Rican public universities that are involved in teaching and research over a wide range of academic disciplines. The Dean of the Faculty of Education was recently appointed to serve as the UCR representative to the National Education Council (EDU 2005), the nation's highest education policymaking entity. Also under the Faculty of Education is the Research Institute for the Improvement of Education in Costa Rica (IIMEC), a leading educational research institution led by Dr. Lupita Chavez. UCR is an active player in education policy and sector reform efforts that directly impact primary education. However, it appears that at UCR primary education is seen as just one among many departments of the faculty of education, and perhaps does hold a position of priority as at other Costa Rican universities.

UCR does not have a special reading program. Reading development is included in several subject areas of the curriculum. The reading specialists mentioned by interviewees include: Dr. Marielos Murillo, who wrote a Ph.D. thesis on children's basic lexicon at the University of Madrid, and Dr. María de los Angeles Jimenez, a Ph.D from Ohio State University, who works on preschool child linguistic abilities. In addition, seven professors teach reading-related subjects in the primary school section.

Our interviewees reported no distance learning experience at UCR. There is also limited use of education technology.

UCR is an autonomous higher education institution; the Ministry does not have authority over its educational and research programs. However, its status as a longstanding academic institution in the country makes UCR an active participant in national education policy. As discussed above, UCR's Dean of the Faculty of Education is a member of the National Education Council, Costa Rica's highest education policymaking body. As at other public universities, the Ministry has commissioned research studies from UCR on various aspects of interest to the educational system.

Most of the students at the School of Teacher Education are working teachers seeking higher education qualifications (diplomas, bachelor's and master's degrees).

The Government of Costa Rica is a major source of revenue for UCR, as are student fees and various national and international research and project grants.

The university's building facilities appear well maintained. Classrooms and offices are well lit and comfortable. The university has a large library and publishing house. The library of the Faculty of Education appears small and poorly stocked. Likewise, the computer center, equipped with 20 machines, seems far too small for the student body.

IV. Country Capacity

The American Chamber of Commerce spends much of its time in Costa Rica motivating businesses to become involved in the country's education sector. There is a belief that the business sector is very motivated to improve education so as to expand the pool of skilled labor in the country, especially as regards new technology.

National businesses are offered no incentives to donate to the government, so donation levels are low. There is talk of making donations tax deductible, but no concrete legal change has yet come to pass. Transnationals are responsible for 40 percent of the businesses in Costa Rica and are motivated to reach out to improve public policy. But there is not yet a strong alliance between the private and public sectors.

There is a high level of misunderstanding between business leaders and Costa Rica's immigrant populations, which include large numbers of Koreans, Chinese, Nicaraguans, Cubans and Colombians. Young immigrant workers often have problems speaking Spanish well. Native Costa Ricans tend to communicate better with supervisors, but still often lack specific technology-related skills.

The U.S. Embassy has been encouraging American businesses to invest in English training programs. Proctor and Gamble has contributed US\$1 million to such a program. There is a presumption that the national business leaders will eventually contribute significantly to the effort. There are those who feel that it will take several years for such a change to take place.

Intel finances projects that work with volunteers and has aligned itself with the FOD to provide four courses to motivate university faculty on technology.

The Junior Achievement program has begun working with students in kindergarten by teaching them about basic fundamentals of entrepreneurship, community economic development, commercial barriers and treaties. By the time students in the program reach tenth grade, they are participating in workshops that help them develop their own small businesses.

The Friends of Costa Rica, a network of American businesses with interests in the country, has published a list of businesses that have donated to education projects in 2000.

Two years ago a national communication network was established in post offices all over the country, placing email service at the reach of any citizen. This helped the UNA and the Omar Dengo Foundation to expand their computer outreach programs. The latter now operates 3,000 computer laboratories across the country. Ninety-five percent of Costa Ricans have electricity and telephones, though the telephones operate on an old line that has not been replaced in years. According to UNDP's State of the Nation, the nationally owned energy monopoly, RACSA, indicates that in 1999 there were close to 100,000 people (or 2.7 percent of the population) using the Internet. However, the energy monopoly run by the government frequently has service failures and disrupts Internet communications in the country for hours or days.

V. Summary

Educators feel that Costa Rica has a wealth of knowledge in pre- and in-service teacher training, but has not made focused efforts to hire reading specialists. While individual educators like Ema Gamboa and Norma Remirex de Chacon have made significant contributions to the development of widely accepted methodologies for teaching reading, the Ministry of Education has not made a career as a reading specialist a realistic option for most Costa Rican educators. The Center of Excellence would be the ideal support mechanism to bring new methodologies to teachers in the classroom and provide the framework to develop a reading specialist program.

The private sector would welcome such a center because it would compel the Ministry of Education to better coordinate with universities. This would enable students to receive a better education and would give businesses a sense of trust that the new workforce is indeed ready for the new millennium.

The UNDP recognizes that the national priority has been education, but feels that the Ministry has not had a clear, structured plan. A Center of Excellence could be the catalyst to organize all efforts, and give direction and clarity to the educational priorities of the country.

There is no doubt that Costa Rica's education system is one of the best in Central America, but there is still much to be done. Many schools in rural areas still have poor infrastructure, inadequate or non-existent libraries, ill-prepared teachers and a general lethargy towards education. There is no real cohesive collaboration or coordination between institutions and the government. There is a need to create effective networks that bring everything together in order to propel a real movement towards higher quality. Perhaps the problem is that one feels there is no raw desire to push for excellence because there is a pervasive belief that the country is already successful.

DOMINICAN REPUBLIC

I. Overview

The Secretaría de Estado de Educación (otherwise known as the Ministry of Education or SEE) launched a reform of the Dominican education system with the Plan Decenal de la Educación (Ten-Year Education Plan) in 1993. Among many of the changes that took place in overhauling the education system was the new approach to reading in the early primary grades. The results of the tests done by UNESCO (First International Comparative Study of Language, Mathematics, and Associated Factors in Third and Fourth Grades, 1998) showed that children in third grade did not fully comprehend what they read.

Challenged to seek answers and solutions, a new methodology used in teaching reading and writing began with a revision of different constructivist theories and an analysis of work done with children in the first grades of primary school. From that, new strategies in learning were designed.

Under the direction and coordination of Ancell Schecker Mendoza, a series of guides were designed to offer teachers methodologies on teaching reading. First, the guides considered reading and writing as an interrelated process. Secondly, the strategies that were offered were presented not as formulas to be followed, but as open, flexible procedures that helped teachers in day-to-day practices.

The first-grade guides offer steps in beginning to construct children's skills in oral and written expression. The guides explain how to search for the meaning of words and how to lead a child through guided constructivism in order to help the child arrive at organized thinking. The series of guides is geared at making the teacher more observant of each child's individual way of learning, asking the teacher to "interpret what the children are doing, what they are thinking, what they are searching for, what they are asking and what they are looking at." It calls for predictions before reading, exploration during reading and interpretation of what has been read after reading through questions or dramatizations by the children.

The guides were published in 2000 with funds from the World Bank and the Inter-American Development Bank. It was mentioned that these texts had been distributed and should be used widely. However, the Ministry acknowledged that even though most of the teachers had received in-service training in these new methodologies, teachers were still using the syllabic method.

Another new educational practice was the installation of automatic promotion from first to second grade. The curriculum was not based on standards, but on content. Students moved from first to second grade at their own pace and were expected to have acquired a reading competency by the end of the second grade.

In field visits, the assessment team found that second-grade classes had texts while first grade did not. Some schools had reading corners, but not all. The biggest drawback seemed to be the shortage of books.

There are few reading specialists as such in the Dominican Republic, but the work of Mercedes (Mechy) Hernandez has been widely acclaimed. A teacher who opened a private pre-kindergarten school, Colegio Círculo Infantil, this specialist has spent 20 years on educational research, and has perfected a methodology for training teachers recently graduated from the universities. In her school, she has trained a cadre of teachers who learn everyday not only from the children they teach, but by the hands-on monitoring and ongoing training that takes place in the school. Her school is a laboratory for teachers and a fine educational center for children ages three to five years.

The Dominican Republic does not routinely apply standardized tests to children in the early years of basic education. Therefore, there is no measurement available to ascertain the progress of children in reading skills. The national eighth grade test is administered every year to students completing basic education. The most recent eighth grade test was administered in July 2001. Several interviewees explained that results were very poor, with nearly 50 percent of students failing to pass in the first sitting (*primera convocatoria*). Surprisingly, results of eighth grade tests had been much better in previous years, when over 90 percent of students passed the tests.

Interviewees expressed the view that the test results reveal that a significant proportion of students are not acquiring the basic skills and competencies as expected in the school curriculum. Poor student achievement can be traced back to the early years of basic education when the basis for future learning was established. The poor results in the 2001 national eighth-grade tests coincide with the even poorer results obtained by third-grade children in a standard test on language skills administered by UNESCO as part of the Falconbridge evaluation in July 2001. Poor student achievement is particularly disappointing when one considers the effort undertaken by the GODR in teacher training in the 90s with funding from the World Bank and IDB.

There is wide availability of educational technology in Dominican teacher training institutions, schools, and in the community at large. Virtual Classrooms (*aulas virtuales*) are available at the National Teacher Training Institute (INAFOCAM) and at each of the SEE's (Secretaría de Estado de Educación) five normal schools throughout the country. A visit was made to the virtual classrooms at both the Santo Domingo Normal School and INAFOCAM. Both virtual classrooms were similarly equipped with a central console, CD-ROMs, ATI, cable TV connection, two voice-sensitive digital cameras, electronic board, regular and handheld wireless keyboards, overhead projector and VITEL system administrator. Both virtual classrooms visited had seating for 30 to 35 students. The program expects to eventually connect with the 350 pilot project schools in order to continue doing distance training for in-service teachers. The schools have dual shifts, so it is contemplated that some primary-school children may also use the equipment.

Internet services are also widely available throughout the country. Information was given about the cyber cafes that can be found at even the most remote communities at fairly accessible prices. There are two private Internet providers that share more or less equally the Dominican market: TRICOM and CODETEL. Modem-based services are still predominant, but DSL is quickly expanding.

The Ministry is also developing a program to make computers accessible to all the teachers at very low prices (\$100 each). Teachers would be offered recycled Pentiums for purchase, and a week-long basic training would be made compulsory.

While the Office of Technology and Information at MOE is currently funded by IDB, the office actually first became functional through three rounds of technical assistance from USAID/DR. The Ministry would like to computerize the entire educational system, including Intranet and Internet capacities. Currently, computer labs exist and Internet connection is being paid for, but the labs are not functional. The same is true at the Ministry of Education, where there is currently no plan to create an IT culture along the lines of what is being done for the schools.

The Ministry has an agreement with CODETEL (a subsidiary of Horizon), the local communications company in which MOE acquired trailers, connected them to the Internet and made them mobile labs. These *aulas virtuales de educación* (AVES) provide schools, teachers, students and the community a connection to the Web. There are 30 operating now and 30 more assigned for future delivery, with a total of 90 projected. The Ministry's challenge will be maintaining the trailers with insufficient budget allocations for that purpose. Future plans in the IT arena include a USAID initiative to promote public-private partnerships in the use of technology through a new dot-com project as part of USAID/DR's new strategy for education and competitiveness.

Learning arrangements for children with special needs are still fairly under developed in the Dominican Republic. Teachers interviewed told us that the preferred approach since the inception of the education reform process in the mid-90s is for "student diversity in the classroom", meaning that children with non-severe physical or mental handicaps are served in regular classes along with other students. More severely handicapped children are served in special schools, which are mainly run by religious groups and private entrepreneurs. The overaged students (i.e., older than the average age for the grade) are served in separate classrooms of public schools.

La Asociación de Padres y Amigos de la Escuela (Association of Parents and Friends of the School) is the officially recognized parents and community organization. On a school visit, the assessment team spoke with some association leaders who informed us that they were active in support of the school, mainly in fundraising to purchase teaching materials and equipment. Their involvement in the educational program was to keep themselves informed of their children's progress and attentive to teachers' comments on their children's performance. We were informed that the majority of the schools have nominal parents' associations, but few are active throughout the school year.

The new institution contemplated under the reform is the Parents' School (Escuela de Padres), which aims at addressing issues of common interest to both parents and children in an after-school environment. Topics include sex, teenage pregnancy, AIDS, violence and self-esteem, among others. To date, only a handful of Falconbridge-sponsored schools have piloted this project, which was part of the 1997 General Education Law.

The Asociación Dominicana de Profesores/ Dominican Teachers' Association (ADP) is the only teachers' union in the country. The totality of public-school teachers belong to ADP. Like most unions, the principal interest is advocacy for teachers' rights and benefits. ADP has a history of militancy with frequent strikes and demonstrations. During an interview, one of ADP's national leaders explained that the union assigned high value and priority to teacher in-service training, and expresses this view as an active participant in education policy dialogue in the country. ADP feels that reform of the education system has not reached the teacher in the classroom. ADP stated that it would offer strong support for the CETT.

The round of educational reforms begun in 1990 in the Dominican Republic came about in the aftermath of the 80s, when debt adjustments and other grim economic realities forced the private sector to realize the importance of education. While perhaps not yet fully comprehending the link between education and competitiveness, the private sector was concerned with the low quality of the Dominican educational system after the ravages of the 80s—brain drain, extremely low teacher salaries, deterioration of infrastructure and lack of texts, among others.

In order to meet the demand for higher-skilled laborers, and attain a larger technological capacity from its professionals, there was a need to revamp the curriculum and demand that those teaching the new generation of technocrats be prepared. This meant producing a reform in which new concepts of learning would be analyzed, standards of quality would be established and a review of human resources would be realized.

The process was to take ten years, hence the Plan Decenal de Educación (Ten-Year Education Plan) was written. The accord came in 1993 and a broad training program was envisioned, to take place in two phases. Eventually, all non-degreed, in-service teachers were to be trained in order to attain an associate's (two-year) degree.

The first phase began in 1993 with the World Bank and IDB as lead funding institutions in this effort, each supporting the training of teachers. Two teacher training programs came out of this loan, the Development Program for Primary Education (PRODEP) and the Professionalization of In-Service High-School Teachers (PPMB). The money was not channeled into university-style bachelor's degrees, but rather into programs tailor made for the reforms. In these programs, the curriculum and number of classroom hours were radically different (and continued to change over time) from what had been offered until then in the system. This teacher certification drive also implemented new salary scales, based on level of training, as a form of incentive.

Four major universities undertook the training of these in-service teachers: Universidad Autónoma de Santo Domingo (UASD), Pontificia Universidad Católica Madre y Maestra (PUCMM), the Universidad Central del Este (UCE) and the Instituto Tecnológico de Santo Domingo (INTEC). All followed the same methodology with the objective to change attitudes and aptitudes by providing teachers with specialized education. There was also a simultaneous conversion of the main teacher colleges, or *normales*, in order to revamp their pre-service programs. The curriculum was also redesigned in this first phase of the reform.

The second phase, in 1997, changed the requirements universities had to meet and extended the training to other universities, including private institutions. The new curriculum was redesigned, with an emphasis on what child-centered methodologies were being used. For the first time, early childhood specialists were trained. Even though the universities were considered bastions of educational training, the Ministry created the Instituto de Formación y Capacitación del Magisterio (INFOCAM, Institute for the Development of Training in the Ministry). Beneficiaries totaled 18,000 teachers in this second phase of the reform.

According to statistics provided by SEE's Department of Statistics, by 2000, 87 percent of teachers overall had acquired a degree in education and only 17 percent remained without a degree. The main deficit group was primary-school teachers, along with some high-school, adult education and technical professionals.

This educational reform clearly established goals to achieve two fundamental changes within the system: 1) to make accessible the professional development of all teachers through new concepts of attitudinal change, values and ethical principles; and 2) to develop capacities and skills in technology in order to best serve the family, the workplace and the community at large.

According to a study done by Francisco Polanco of PUCMM, 72 percent of in-service teachers are women, 58.3 percent of teachers chose the profession specifically and 40 percent stated that they had tried studying other careers before turning to teaching.

The assessment team heard similar comments from various stakeholders, including Dominican NGOs and others about the drawbacks of the reform effort. The GODR had good intentions, but reform remained conceptually distant from local-level school and teaching conditions. Though decentralization was important in the reform, few resources were issued to local institutions. Small private schools grew in number of necessity; about 30 percent of local schools are now private and the number is growing.

IDB felt the root of the problem lay in the lack of reading skills. Tests had shown that children ten and eleven years old suffered the most. The cause was primarily the lack of time teachers spent in the classroom, often from two to two and a half hours out of a four-hour work day. Principals had little authority, and the unions forcefully countered goals the Ministry tried to accomplish. This, coupled with the background of children, 60

percent of whom fall at or below the poverty level, added to the inefficacy of reform efforts.

Additionally, the GODR spends only 2.5 percent of its federal budget on education. Schools often operate without basic necessities, with no chalk, no water, etc. Teachers have been ignored in the past when raising these issues of extreme need in schools.

Principals and teachers said they had been working for the past six years to transfer the curricular changes into the classroom. There were teacher tutors that came to schools to provide mentoring and some follow-up to the initial training. The tutors worked closely with first- and second-grade teachers. These observers felt that there were many students repeating grades because teachers did not have time to cover all the material and often students were being tested on material they had not covered. There was a great deal of pressure on teachers and this added to the sensitivity teachers felt about the need for quality education.

A plan to integrate 60 master trainers after a two-year training into the Ministry did not work. These specialists in reading and child-centered methodologies travel from school to school, currently earning less than a classroom teacher. Because their status is unsure, they are not being effectively used. There is also the transportation expense that these specialists have to absorb since they do not receive any per diem for their transportation.

In the schools visited, teachers were found to be using traditional methods of teaching reading. There was more of an emphasis on writing and copying, thus developing good motor skills, but no reading abilities. Few books were observed in classrooms, and it was unclear if any of the teachers ever read to the children.

A few schools have small libraries and there are very few books in schools. There are few schools that have reading corners. Nonetheless, the Ministry of Education is training librarians (100 to date). The hope is that money will be forthcoming for small school libraries, and that these librarians can impart their knowledge to teachers.

The Ministry provides a scarce amount of materials; primarily teachers rely on their own creativity. Some teachers use the daily paper, *El Listín*, as an educational source for reading, math and other subjects.

While MOE does not have its own library and the National Library is extremely meager, some Dominican universities have respectable libraries. PUCMM, for instance, has 40,000 books at its Santo Domingo campus and 500,000 books at its second campus in the interior of the country. The university has an on-line catalog, reference room, reading areas, books, magazines and periodicals, as well as a videoconferencing room and computers with an Internet connection. The UNESCO study mentioned above also showed that there were a minimal number of books in school libraries and in children's homes. While this was the case in all countries participating in the tests, it was especially noticeable in the Dominican Republic.

II. Teacher Training Needs

The distinction between pre-service and in-service teacher training is blurred in the Dominican Republic, since the majority of the students at universities and normal schools are full-time teachers in the public schools. Most teacher training is, thus, in-service training, but the course of study is the same as the curriculum for initial, pre-service training. This training drive is the result of SEE efforts, with World Bank and IDB financing, to provide university-level credentials to all in-service teachers. Three universities—INTEC, PUCMM and UASD—entered into a cooperative agreement with the SEE to train the bulk of the teachers. SEE pays the universities a tuition fee for each teacher enrolled and stipulates the minimum academic requirements. INTEC and PUCMM are recognized for their teaching programs. UASD has the largest student enrollment, but lags behind in quality of training.

Regarding the teaching of reading, as in other countries, the Dominican Republic's universities have not focused on reading instruction. All three of the above universities include the regular courses on Spanish teaching in primary education, and reading and writing teaching methods (*Didáctica de la Lecto-Escritura*). INTEC informed that it is researching and drawing up plans to strengthen its reading development curriculum.

The main source of in-service training is the summer courses and workshops offered by the SEE's INAFOCAM at various locations in the country on a long list of subjects. INAFOCAM reports that during summer 2001, there were 295 courses, three conferences and one round table that were attended by 15,265 teachers and principals. These lectures range from four to 12 hours in duration, the longest of which may last for three Saturday mornings. Some 20 universities and institutes conducted these training events for INAFOCAM. Out of a list of 70 course topics, three were on teaching methodologies for reading, four on school library organization and one on children's literature.

Under the Ten-Year Education Plan, there were 70 schools around the country that acted as teaching centers. The 10,000 designated teachers were broken into two groups of 5,000 each per two years. There was first a one-month period of immersion on a university campus and later 14 months of Saturday classes. The follow-up was a monitoring of three hours, which represented a class period. After observation, teachers would be interviewed and asked about changes he or she felt had taken place since the training. Then peer teachers and the principal would be asked about the teacher. In the end, a focus group with parents would take place for another perspective.

Even though 60 percent of the participating teachers said that their attitude had changed and that they were now using child-centered methodologies, observers noted that 65.3 percent of the teachers were still using the blackboard and children were still copying from the board.

Teachers in the Dominican Republic are investing time, effort and money to attend university courses and obtain degrees. This interest seems to indicate that teachers perceive training as important for personal and professional growth. Coupled with this

inclination on the part of teachers, the government is trying to provide significant access to training for all of its in-service teachers.

Some outside efforts, like those of UNICEF, have focused on the needs of teachers in rural areas served through multi-grade schools. The Falconbridge Foundation is also providing services to teachers in rural areas. These initiatives need to be replicated in the rural, disadvantaged areas of the country. They can also serve as a model that the Center of Excellence can hope to multiply.

There is currently no official policy towards bilingual education in the Dominican Republic. With increasing numbers of Kreyol-speaking families entering the country, the issue of educating multilingual populations will become more and more pressing. The GODR does not have the resources to attend to this need.

In summary, the assessment team found that the main teacher training needs center on translating the reform principles into classroom instruction. School district supervisors need to be trained and empowered with a mandate to provide support to teachers in curriculum development.

Some specific teacher training needs include: evaluation and testing tools, awareness of the value of reading, ways of motivating students to read, library science basics, the use of stories as a teaching tool, cooperative learning techniques, the use of reading to integrate cross-cutting themes (*ejes transversales*), teaching methodologies in reading, ways of instilling sound study skills in students, how to involve parents in children's learning, conflict prevention and management, classroom management and discipline and design strategies for instruction.

III. Institutional Profiles

PUCMM (Pontificia Universidad Católica Madre y Maestra/ Pontifical Catholic University Mother and Teacher)

The Pontificia Universidad Católica Madre y Maestra has two campuses, in Santo Domingo and in Santiago de los Caballeros. The two campuses have over a million square meters of land combined, 33 buildings, libraries, and numerous computer labs. The university has a virtual classroom with capacity for 30 students. It utilizes a Smart Board, a 52-inch television, two-way video cameras and a computerized VTel console. Throughout the second floor of the main building at the campus in Santo Domingo, there are numerous computer laboratories with 20-plus Pentium II computers, all with access to the Internet. The university also has a main library, in the city campus, which also has computers for students and has an on-line catalog. Within this building is a classroom for audiovisuals, including older technology such as microfiches.

Though the educational technological capacity of the university is not superior, it is effective in its distance training operation as well as in its extension program. Most of the distance training programs are geared to the in-service teacher training contracted by the

MOE. PUCMM is presently working with the University of the West Indies in a course via the Internet for a master's degree in Public Administration. Another program in the Caribbean is underway with funds from the European Community. It was mentioned that the Global Alliance Foundation conducted a study, which discovered that the best technological platform in Latin America was in Santo Domingo.

A software program for motivational reading, EDUSOFT, was developed by a PUCMM team, with technical assistance from an Israeli company. The software is called *Tiempo de Lectura* (Time for Reading). It is a computerized program to teach strategic, analytical and interactive reading for children from third to eighth grade (ages 8-14). The method contemplates three phases in which the student interacts with the computer. There are activities before reading, during reading and after reading. The software also has a wide selection of Latin American stories, enriching the children's cultural heritage.

PUCMM has a limited number of students studying education directly after completion of high school. As PUCMM is a private university, all students either have the financial means to attend or have been offered a partial scholarship. There is a definitive course curriculum in Health Sciences, Engineering, and within Social Studies and Humanities, the university offers a degree in Basic Education. PUCMM also offers master's degree programs in Educational Administration, Educational Math and Educational Supervision.

There is no specific course that prepares students to teach reading. The subject matter forms part of a curriculum that in some manner discusses reading methodologies, but very cursorily. In addition, most education students graduate and go to work for private schools. Since 1993, 1,400 students have graduated with bachelor's degrees.

The university has for the last few years paid significant attention to developing its primary education program. Their relationship with the Ministry has been a positive one and continues to be not only contractual, but advisory as well. PUCMM is recognized as one of the best teacher training universities in the country.

PUCMM was one of the universities selected by the SEE to participate in a primary-school development project, PRODEP (Proyecto de Desarrollo de la Educación Primaria/ Primary Education Development Project). In-service training was initially carried out by the PRODEP program, performed in two phases in accordance with the IDB loan. The first phase lasted 18 months, with the mandate to upgrade the teaching level of 10,000 teachers. PUCMM was able to give their assigned teachers 66 college credits and graduated over 300 teachers with associate's degrees. The courses were mostly 9 to 12 credits, some less. With the second bank loan, the university continued doing in-service training for two years and graduated 559 with associate's degrees. Priority was given to teaching methodologies, constructivism and content areas. Because of the UNESCO testing results, there is now a new focus on teaching reading methodologies.

The university also developed educational materials for these courses (with USAID funds) and later gave its rights to the SEE to distribute these materials to all schools, especially poor, isolated schools. The materials were specifically geared to math and

language. Some of the courses were face to face, others were through video and television.

Funding for the university comes from agreements with many international universities, as well as a program financed by the William P. Kellogg Foundation. However, most of PUCMM's funding is through its student enrollment.

The university is very interested in collaborating on the Center of Excellence project. Representatives of the school were very gracious in showing the assessment team all facilities and openly answering all questions. Interviewees expressed the belief that the agreements now in place with many other Central American countries gave them an edge in understanding regional needs. PUCMM officials are convinced that economic accords are unable to be met without investing in education, and they want to continue being a part of that effort.

ITLA (Instituto Tecnológica de las Américas/ Technological Institute of the Americas)

Although ITLA was developed by the Dominican government (with the Chinese government donating more than US \$12 million), it is run like a private company. From its marketing practices to its coordination of training ideas, it creates a synergy with the community it serves. It is a vast complex in Santo Domingo with four large, main buildings, a park, and a great expanse of land for future growth. It is the most complete distance-training center observed in the Dominican Republic.

ITLA's objective is to train all the teachers in the country in the use of technology as a teaching tool. ITLA also aims to be a part of a design effort to provide materials and distance training to enhance educational skills of teachers in the country. ITLA and SEE work together, and IDB is working closely with both institutions to provide quality technology-training to teachers.

In the ten months of its existence, ITLA has trained 1,500 community members of a nearby disadvantaged, marginal area. Out of these individuals, 35 were selected to become trainers in programs specializing in networks, hardware and software. Soon, ITLA is to offer scholarships to 450 outstanding students from the nearby schools.

In conjunction with the Ministry of Education, ITLA has begun training 500 teachers to become school computer lab monitors. These teachers will, in turn, be responsible for teaching what MOE forecasts to be 100,000 students in a 350-school pilot project.

The staff of the center have developed tools on-line in order to offer email, Web pages, forums, agendas, on-line support, predefined formats, statistical graphics, seminars, interactive exercises, electronic articles and other materials.

ITLA is still under construction; its final phase envisions acquiring 400 computers connected to a network with six servers. To safeguard the sophisticated equipment it now

houses, ITLA has an electric generator of 300KWA capacity per building. And it has an UPS 60KWA capacity in each building as well.

ITLA's connectivity is impressive. It has a dedicated Internet line, ISDN service for videoconferencing, PABX Norstar 0x32 with capacity of up to 240 portals and an initial configuration with 20 telephones, including voice mail. Along with this, it is interconnected throughout with 100Mbps switches, fiber optics and cable for all four buildings in order to connect with voice and data. It has Multicast and Broadcast video, and four servers for internal email and back-office applications.

The complex also houses four virtual classrooms with 150 Pentium III PCs, with Windows 2000, 64Mb and 128 Mb and 10 Gb of hard drive. It has a hardware lab as well as a multimedia lab and an auditorium for 60 persons, equipped with videoconferencing equipment.

With all the labs and technology available in the country now, on-the-job training should be promoted in order to provide skilled labor for the private sector. There is a culture shift towards ICT growth that should be encouraged.

INTEC (Instituto Tecnológico de Santo Domingo/ Technological Institute of Santo Domingo)

INTEC is a medium-sized private university currently enrolling about 5,000 students in regular courses and some 3,000 in short, continuing education and university extension education courses. INTEC was created in 1972 by a group of business leaders and intellectuals with the vision of establishing a center of excellence in higher education, particularly focused on research and graduate studies. According to the Academic Vice-Rector, INTEC soon realized that its aspirations to providing high-quality education could not be realized unless students arrived with a solid grammar-school education. Therefore, since its beginnings, INTEC has had a strong interest in education and social progress.

In addition, INTEC has been active in a number of social development programs in the country. Included are the USAID-funded Center for the Development of Small and Micro-Enterprises (CAMPE), Civil Society Strengthening Program (funded by IDB), Social Research Program in the Villa Juana Neighborhood, and the Gender Studies Center (funded by Ford Foundation), which offers a master's degree in Gender and Development Studies.

INTEC's main sources of financing include: student tuition fees (60 percent of total budget), sales of consultancy and training services, donations for specific projects, sales of publications, and other student payments. As with all universities, both public and private, the GODR provides a small subsidy that amounts to about one percent of the university budget.

INTEC has strong teaching and learning infrastructure, including one of the best-stocked university libraries in the country, which includes audiovisual and multimedia resources for the use of professors and students. INTEC has made large investments in laboratory and other learning equipment for all of its departments, including its recently launched REDINTEC, an online teaching link. INTEC is a member of Red ATEI (Asociación de Televisión Educativa Ibero-Americana). The university has its own teleconferencing facilities and has recently completed the construction and equipping of two virtual classrooms with seating for 150.

INTEC is an accredited regional academy of CISCO. INTEC currently runs three joint degree programs with foreign universities: an MBA course with the University of Barcelona, a Social Education and Socio-Cultural Animation Program with the University of Seville, and an Ed.D program in Educational Leadership with Florida Southeastern University. In these programs, there is a combination of distance teaching and face-to-face instruction.

INTEC does not have a pre-service teacher education program of its own. Along with three other universities (PUCMM, UASD and UCE), INTEC entered into an agreement with SEE to train in-service teachers for the basic education certificate course (*Profesorado en Educación Básica*) and the *licenciatura* degree in basic education as part of a massive teacher-training program funded with World Bank and IDB loans. SEE pays the universities a tuition fee of DR \$90 per course credit, which INTEC (along with the other universities) finds insufficient to cover the costs of the course (the regular cost per credit is DR \$315). INTEC has graduated 500 teachers from this program. In addition, 60 teachers have pending graduation requirements. This standards and quality of this teacher-training program were in discussion at the time of this assessment.

The *licenciatura* degree for teachers requires a total of 226 credits, the first cycle leading to the *profesorado* certificate requiring 116 credits, spread over nine trimesters. The second cycle of 110 credits spread over another nine trimesters completes the *licenciatura* degree. The study program includes general introductory subjects on educational sciences, subject matter content and methodology on each of the subjects of the basic education curriculum in six levels each (Spanish language, mathematics, social sciences and foreign languages). There are four levels of teaching practice in the first cycle and one in the second cycle.

It appears that INTEC has a serious interest in early childhood education, especially basic skills development, including in reading. INTEC offers a graduate diploma course on preschool education in which issues of learning preparedness are confronted. The head of the preschool course was a former Initial Education Director at the SEE, and also associated with the Mercedes Hernandez model kindergarten school. There are three professors that are currently involved in teaching reading. In addition, the Education Department Director provided a copy of their proposed diploma course on reading and math. The director is also doing research for her doctoral thesis on early childhood learning issues.

UASD (Universidad Autónoma de Santo Domingo/ Autonomous University of Santo Domingo)

UASD is a large public university with a total enrollment of about 120,000 students. The university is limited in certain aspects, as it does not have a library or technological capacity. Administrative capacity is lacking at UASD as well.

The Education Department has an enrollment of 28,000 students or 25 percent of the total university enrollment. The university has eight regional campuses around the country. UASD has been a participant in the IDB/WB funded SEE in-service teacher training program. There are 8,000 students pursuing the basic education *licenciatura* degree, and 3,800 in the initial education *licenciatura*. UASD has graduated over 7,000 teachers under the SEE teacher training program since 1995. It has also graduated 500 students with master's degrees (also under the IDB/WB program) in the areas of school administration, social sciences, natural sciences, and mathematics. Master's degree courses are offered on Sundays from 9am until 4pm, over a two-year period, with no reading lists and a very short essay as a "dissertation" requirement.

The Education Department at UASD is within the Faculty of Humanities, which also includes the departments of Psychology, Anthropology, Social Sciences, Natural Sciences, Linguistics, Foreign Languages, Arts and Literature. Students receive training at the Education Department and other departments. The university has a laboratory school where the students carry out practice teaching and other school-based projects. The Education Department employs 203 professors, the majority on a part-time basis. Their salaries compensate them for time in front of the class only and not for class preparation or for personal attention to students. Ninety percent of UASD professors currently hold a master's degree and, by 2005, UASD will require a master's degree from all of its professors.

IV. Country Capacity

The research team met with numerous international and domestic business representatives to discuss possible support for the CETT. The interviews, while not specifically addressing the question of the Centers of Excellence, do provide important information about the readiness of the private sector to support educational improvement.

Several themes stand out as pertinent to the Center of Excellence idea. First, there is a tremendous lack of trust on all sides that characterizes the environment. Business is highly suspicious of the public sector and would likely decline to support any project that was seen as emanating from the government. In addition, with a few exceptions, the private sector tends to see the NGO community as potentially corrupt or lacking in efficacy. For businesses to consider supporting the project, the CETT would need to have a credible interlocutor, either a trusted international sponsor, such as a multi- or bi-lateral donor, or a national group with great credibility.

EDUCA, the education foundation funded by the Dominican business community, unfortunately is lacking in capacity for this role. Some interviewees see EDUCA as being able to be proactive under the right circumstances, while others are extremely critical of its lack of action and ineffectiveness.

Another theme is the generally poor regard in which teachers are held. Teachers are often portrayed as mainly concerned about their salaries while the teachers' unions fight for privileges teachers have not earned. The CETT will potentially need to convince a potential sponsor that the CETT initiative will address these problems, or demonstrate the inaccuracy of this image of teachers.

Third, the legal framework for corporate donations is extremely murky. Most corporations are confused about what can be deducted on tax returns. Until this is resolved, many companies are reluctant to give anything. It is essential that the legal framework for corporate charitable giving be clarified and that the correct information be disseminated in the business community. It is essential that the Dirección General de Impuestos Internos be the organism that communicates this tax information, as this entity has credibility with the private sector.

Corporate participation in educational initiatives may be a challenge. Many firms in the Dominican economy have experienced the economic fallout of September 11. The tourism sector is laid off many people, the *maquilas* worry about falling demand in the United States and many firms felt that significant belt-tightening is about to occur.

In the Dominican Republic, companies vary widely in terms of what they see as their function vis-à-vis education. None of the companies interviewed, that currently have school sponsorship programs or are working with schools in some way, is doing any monitoring or evaluation of the impact of their programs. While some companies agree this would be a next step, others feel it is not their role to do so. Teacher training is another area where the business sector is ambivalent. A few of the firms have undertaken some type of training program, but others stated categorically that training is the role of the MOE and that companies would not pay for teacher training programs.

School sponsorship is seen by businesses as providing a short-term return in terms of good public relations. Although some companies see that, in the long run, their interests are best served by a better-trained workforce, their focus is on the short-run benefits. Most companies do not see their participation with the education sector as addressing the long-term education quality issue. A number of associations and business people also believed that many in the sector are not convinced of the need to improve education in any case since they prefer to compete on the basis of low-wage, low-skilled labor.

These points raise a number of questions for private-sector participation in the Center of Excellence program. First, there have to be some measurable gains for the private sector to agree to get involved. Future quality improvements in education are probably an insufficient incentive. Second, getting businesses on board with the idea that they need to become involved in programs related to teacher training will take a major consciousness-

raising effort, undoubtedly related to the theme of competitiveness. Most firms tend to see what they do as philanthropy rather than any sort of long-term investment. Third, while the business sector is known to evade taxes in many cases, often offer no pensions or health care to workers, and benefit from a number of protectionist government policies, companies still feel that they are being asked to do a great deal of what usually falls under the heading of social policy. With the Dominican state unwilling or unable to take up the traditional obligations of government, the private sector is undaunted with requests in the areas of health, environment, and local development, in addition to education. It would be wise to coordinate education requests in a package so that individual programs do not get lost in a sea of petitions. In addition, showing what results companies can expect for their donations, and how such feedback will be provided to them, could help shift businesses' thinking from philanthropy to an investment frame of mind.

Two NGOs involved in education, EDUCA and Centro Poveda, provide intellectual and policy leadership and innovative community-based education programs. EDUCA was part of USAID's Private Initiative for Primary Education that ended in 1997. This NGO was involved in the program, *Aprendo*, a yearly activity for everyone in the education community that includes short workshops by publishing companies to discuss the use of their books. Teachers are charged \$200 pesos (about US\$10) for these workshops that usually last a weekend. EDUCA searches for funds from the private sector to carry out different workshops of interest to teachers. A project with Phillip Morris, called *Yo tengo valor* (I have courage), was coordinated with the Ministry of Education. The object was to raise the self-confidence of adolescents.

EDUCA has also been involved in reading workshops. Many of its facilitators obtain more attention and support from the Ministry than actual teachers. They work closely with disadvantaged communities and train parents in the care of young children. A community committee is formed, they are given a training of trainers for a week, and then facilitators schedule visits twice a month to see how parents are working with young children. The group of facilitators that the NGO coordinates includes one of its own facilitators, a Peace Corps volunteer and a Japanese volunteer. The idea is to create a community model that takes care of the pre-kinder population in isolated, rural communities.

Another NGO, FLACSO, is part of a Latin American network of social science research. FLACSO/DR has conducted an important evaluative study on the implementation of the education reform.

One resource that could be tapped, especially in rural and semi-urban areas, for expertise in reading and writing skills is the group of CASS program alums in the Dominican Republic. These professionals have received training at a USAID/Georgetown University program and have returned to Central America and the Dominican Republic with increased capacity in some areas of interest to the CETT.

UNICEF has an outstanding program for the innovated multi-grade school. Taking the *Escuela Nueva* (Active School) as a model, the program took into account the context of the Plan Decenal and established a methodology where teachers were trained and then received personalized monitoring with classroom observation and microcenters. The project started in 1994 with ten rural schools. It now serves 210 schools and expects to eventually reach 4,049 schools. The project has succeeded in bringing to the forefront the importance of rural schools and the problems they face. The Innovated Multigrade School is an educational innovation that, in practice, is demonstrating the feasibility and enormous potential of its work team, and a strategy that works in rural education. The greatest limitation in the project is the lack of learning guides. Without the learning guides there can be no real personalized learning. It is also a hindrance to group-work-centered classes, and the use of learning corners and libraries. Even though the program has been running for four years, the lack of materials merely indicates how fragile innovative strategies are where there is no substantive federal budget dedicated to education.

Peace Corps initially began its involvement in Dominican education by running resource centers in different rural areas. For eleven years, Peace Corps volunteers (PCV), who serve as support personnel for MOE employees in the field rather than education specialists, have conducted workshops for teachers in the development of educational materials using appropriate technology, such as discarded and natural materials from the local environment. Peace Corps has built nine resource centers and trained 15,000 teachers.

Peace Corps was also involved in providing workshops for teachers on classroom management. The Ministry makes recommendations about where the Peace Corps needs to work; PCVs then travel to the isolated areas and provide workshops in constructivist methodologies. At the time of this assessment, there were seven PCVs working in two schools with 30 teachers on classroom management.

Aside from its initial interest in the training of primary-school teachers, the IDB is now concentrating on the development of 90 centers in the rural areas on the model of Mechy Hernandez's Colegio Circulo Infantil. The IDB has contracted Mechy Hernandez to facilitate the cadre of master-trainers needed to multiply skills to preschool teachers in the rural areas.

V. Summary

All government institutions, such as SEE, ITLA and INAFOCAM were very interested in being selected or having the country selected as the site of the Center of Excellence. The Ministry welcomed any aid in strengthening teacher training, especially as there was not a specific course at the university on reading. SEE felt that the concept and objectives of the Center were very much on target and would welcome any new ideas or innovations in reading.

The interest that all parties had with bettering education indicated that there was a real concern for progress that they felt the Center would address. There was the sentiment expressed that, with a cohesive group of experts from the region functioning as an advisory committee, the delicate regional educational interests could be handled.

There is a sense that, in all the countries visited, there are institutions that have some very outstanding academic programs, but hardly any technology or vice versa. So there is a perception that perhaps a linkage should be made of some of these institutions in order to produce a quality Center.

Both teachers and principals felt the concept was very timely, especially if, within the concept, there were plans to develop materials. There is a real need for children's books and they saw the Center as a resource that could provide them.

PUCMM felt that the Center was an answer to the educational needs of the region since studies had just come out and demonstrated that efforts had to be made to improve the reading habits and skills of children. PUCMM very much wanted to be a part of the effort. The assessment team found that PUCMM offered capacity in quality educational materials and distance training, but was not equipped with the state-of-the-art technology of ITLA.

ITLA felt strongly that it was strategically positioned to impart Center activities very well from its Web location. It felt that the Web site was ideal for the concept of a Center that integrated the best innovations and skills in the subject of reading.

EDUCA felt that even though the government was making a great effort in bringing reform and quality to education, it needed a balance and they saw the Center of Excellence as the necessary balance.

Capacity can be harnessed in the on-site presence of Peace Corps volunteers that oversee the centers where teachers in the rural areas are being trained. Other in-country human resources could be tapped for the CETT, including Mechy Hernandez and the cadre of teachers she has trained at the Círculo Infantil.

EL SALVADOR

I. Overview

The assessment team found that El Salvador could boast the greatest progress among Central American countries in its education reform process. The new Constitution of the Republic (1995), the General Education Law of 1996 and the Law of the Teaching Profession of 1996 provide a strong legal framework for the modernization of the nation's education system. The reform process is crystallized at the classroom level through a continuous process of curriculum innovation that began in 1992 with the SABE (Solidificación del Alcance de la Educación Básica) project sponsored by USAID and culminated in the ten-year Education Reform Plan 1995-2005. The ten-year plan focuses on expansion of the system's coverage, improvement of the quality of teaching, value formation, and modernization of the administration of the school system. In 1999, newly elected President F. Flores adopted the education reform plan of his predecessor, which allowed for a healthy continuity in reform.

Throughout the 1990s, El Salvador has put in place a number of mechanisms to ensure that the education innovations proposed as part of the reform process are actually implemented in the school community and are reflected in the quality of classroom instruction. The Education with Community Participation Program (EDUCO) is an example of such mechanisms. EDUCO is a major tool for the expansion of system coverage to rural and deprived urban areas, as well as for the decentralization of system administration through local community involvement. Community participation in education is further institutionalized in El Salvador through the School Directing Councils (Consejos Directivos Escolares or CDE), the Education Community Associations (Asociaciones Comunales de Educación or ACE) and the Catholic Education Councils (Consejos Educativos Católicos or CESE). Currently there are 8,000 classrooms established in 1,500 communities under the EDUCO program.

The Ministry of Education must be recognized as a positive and proactive force in El Salvador. Under excellent and highly credible leadership, the Ministry has been able to stay on top of the education reform, while also attending to the physical rehabilitation of facilities. The MOE has launched several impressive initiatives toward the improvement of the quality of education at the classroom level. While these programs and innovations have decelerated due to the redirection of investments toward physical rehabilitation after the 2001 earthquake, they still have remained fixed on improving the education community. There are two programs, Escuela Diez: Asesoría Pedagógica (School 10: Pedagogical Advising) and Centros de Recursos de Aprendizaje (Learning Resource Centers or CRAs), which are described later in this report and in extensive documentation provided by the Ministry.

The results of the education reform are becoming increasingly visible in the performance and productivity of the system. For example, basic education coverage has increased from 90.6 percent in 1994 to 93.3 percent in 1998. The greatest increase is being

experienced in the preschool level and in the rural areas. Adult literacy (ages 15 and over) has decreased from 20.4 percent to 17.2 percent during the same period. The average years of schooling of the population increased from four years in 1994 to five years in 1998. Finally, the rate of overaged students in basic education dropped from 19 to 15 percent in the period. Among the main challenges that still remain in the Salvadoran school system is to increase the coverage rates for the higher levels of the system, which currently stand at a mere 42 percent for the third cycle basic education and 26 percent for the secondary level.

One of the most outstanding features of Salvadoran education, in comparison to other Central American nations, is the level of support and creativity sponsored by the private business sector. There is a plethora of local, national, and international businesses involved in aiding all sectors of the educational process. Corporate contributions are readily apparent in schools visited. Of the six schools visited, all had some relationship with local and national corporations, and two with international donors. With respect to the support of ongoing MOE operations, exceptional leadership and contributions are provided by the two large corporate foundations: FEPADE and the ALFA Group. Together they comprise some 100 foundations and corporations united to advance public education. They have been instrumental in fostering education reform, improving programs, and supporting research vital to the launching of innovations (detailed descriptions of these two organizations follow).

The earthquakes of January and February 2001 had a disastrous impact, damaging more than a third of all the nation's schools—nearly 2,000 facilities. As a result, the Ministry of Education has had to redirect most of its discretionary resources of this year's budget and all funds earmarked for innovation and expansion to building rehabilitation. Despite the magnitude of the damage suffered, MOE has made significant headway toward extending basic education to all areas affected by the disaster. Reduction of funds notwithstanding and to the credit of Salvadoran leadership, domestic funds dedicated to education have continued to grow (a seven percent increase in MOE's budget is being planned for the next fiscal year). The public education system has and maintains an excellent support infrastructure for local schools. Teachers are well paid by Central American standards, and schools are very well equipped with instructional materials and didactic support.

II. Teacher Training Needs

Similar to most Central American countries, initial training of teachers is provided by tertiary-level education institutions. The Ministry is moving to impose tighter quality-control measures over university teacher training programs. A new standardized examination, the ECAP, will be administered to this year's *profesorado* graduates from university teacher training programs. Next year, the Ministry will require universities to limit the acceptance of new students in teacher training programs to the top 50th percentile of incoming pupils.

Reportedly, universities are diminishing their role in teacher training. The major cause of this phenomenon stems from the overproduction and great numbers of unemployed elementary teachers. Of the 32,000 members of the public and private teacher corps, between 12,000 and 18,000 (depending on the source) are out of work. Consequently, of the 15 universities involved in teacher education two years ago, only seven currently have any significant enrollment in teacher training programs. Among those, very few are training elementary teachers.

Because of the surplus of teachers, and reduced or discontinued teacher training at the universities, there is no outstanding candidate institution among the universities that may serve as the regional Center of Teacher Excellence. Some institutions have gained credibility as teacher training centers, most notably UCA and the Universidad de Don Bosco. However, the combined number of students enrolled in *profesorado* programs for primary school is so limited as to render these institutions all but marginal.

The Ministry of Education staff development and training division has conducted in recent years what it describes as a major overhaul on how in-service training programs are conducted. Former supervisors have been replaced by pedagogical advisors (*asesores pedagógicos*). The pedagogical advisors conduct in-house assessments of teacher performance and offer on-the-spot guidance or instruction for improvement. Training-of-trainer programs have been replaced by this new approach. There is a teacher certification program in place at the Ministry. Fourteen centers have been established to accomplish the task of certifying teachers. This is an exemplary way of bringing education reform and modernization close to the classroom.

In a second innovation, the Ministry has created a CRA program that currently assists middle schools to fortify their technical infrastructure. The program has already impacted 60 percent of the schools, and the remaining schools are expected to be served by early next year. The next phase will involve working with the primary schools. Within this program, plans are in place for the creation of EDURED to establish a computer-based program where distance education can serve the needs of the local schools. The institution of an email system will facilitate communication with the principals. Schools will have access to the Internet, and a teacher email system—and hopefully also student email access—will be established.

Another innovative approach to teacher in-service training is through a modeling approach under a program called Escuela 10. The Escuela 10 program is a model-school program designed to promote what model schools look like so that they may serve as an example to all schools. It is designed to provide greater leadership and hopefully change the institutional culture of excellence in education. The Ministry plans to install enhanced technological systems in these model schools as an incentive for more schools to apply to participate in the program.

Visits to several schools reinforced the depth and breadth of training problems and possibilities. Following are highlights of those visits:

Centro Escolar E Instituto Canton El Potin—Tecoluca San Vicente

The school is located about 50 miles from the capital in a rural district that is subject to flooding during the rainy season. It has suffered from natural disasters such as earthquakes and lightning, and has been repaired many times.

The interviewer had the opportunity to visit most of the preschool through second grade classrooms. The students were well behaved and very well dressed. Male students wore white shirts and ties, and the female students wore uniform skirts. All students were well groomed and attired. The school was freshly painted and very clean. Students stood upon entering the classroom and spoke only when addressed. They were courteous and attentive.

The school has small but efficient facilities to raise egg-laying hens and medicinal honey production. The agriculture students attend to the collection and maintenance of these facilities, and provide practical instruction in these areas. The school provides a free meal service and has a small shack for students to purchase soft drinks and snacks. All proceeds are reinvested to help defray the costs of the school's maintenance.

The assistant principal reported that very few reading methodologies were taught in the universities. The other interviewees agreed. Mostly students were taught to use very basic phonetic techniques but the approaches were not systematized in a curriculum format. Some drawing techniques, using colors and letters of the alphabet, were incorporated in the reading format. Other techniques included learning through playing using bingo-type games. The interviewees expressed interest in more instruction and a more formalized curriculum in this area. Most attended the National University, and one attended the Universidad Andres Bello. The strengths of these institutions were accessibility and low cost. According to the principal, the National University has a solid infrastructure, a quality teaching curriculum, and good instructors. He reports having access to private institutions for the teacher practice phase of his student career. Classroom instruction was structured to permit students to work and attend classes at the same time.

Institutional weaknesses included poor and dilapidated infrastructures (national university located outside the capital) and a lack of comprehensive instruction. The best institutions for teacher training in the country are run by the Ministry of Education through its three regional centers for pre-service training. These centers are very well equipped (technologically), and are air-conditioned and comfortable. The National University (central campus) was cited as the other best institution.

Training events are conducted mostly by and through the Ministry of Education through a fund created to allow in-service training and according to the specific needs of the teacher. Training is infrequent and involves general methodologies for middle and junior high school. Specific courses on reading instruction include reading/writing (*lecto-escritura*) but were not as well developed as teachers would have liked.

Priorities to improve teacher training for reading include multi-grade classroom techniques, didactic planning, evaluation techniques, enhanced reading/writing techniques. Priorities to develop children's abilities to read include detection of specific needs in the children and new methodologies for teaching reading. To improve teachers' capacity to teach reading, focus will be placed on new and improved methodologies with advanced technology.

With the exception of FUNPRES, there are no specific programs to assist children with special educational needs in the country. FUNPRES provides training and technical assistance through its instructional programs, but a great deal more is needed in this area.

Study programs for reading instruction are limited to informal reading/writing programs, and reading instruction is provided mostly through read/write techniques. There is some phonic instruction, but it is very basic.

Currently pedagogical advisors help teachers with evaluation of student progress, but more programs are needed. There are written guides that help teachers assess student progress (when teachers are able to use the guides). Mostly evaluation is conducted by grades achieved, but individual assessment is performed when possible.

The materials used to instruct are created by the teachers themselves. Audiovisual aids are virtually nonexistent. The school has one VHS VCR and one monitor. These are shared by all of the classrooms, and frequently scheduling conflicts cause interruptions and prevent the proper flow of instruction. The videos used are mostly documentaries and educational programs, and discussion and instruction revolve around the content. Instructional guides for these videos are created by the teachers themselves.

Regarding community involvement, the EDUCO program has been instituted by the Ministry to involve the community in hiring and paying teachers in educational programs for the children in the communities. The Ministry of Education facilitates community participation in training through per diem and transportation expenses. If the school evaluations are positive, the teachers are offered a modest fee to assist at training events. Classes are structured as roughly 60 percent didactic and 40 percent experiential. The personnel expressed a specific need for more technological support such as computers, computer instruction, access to the Internet and email for principals and teachers.

Although this visit was unannounced, it was obviously a model school (Escuela 10 candidate) and likely not representative of other Salvadoran schools. The principal reported that in his 12 years in the education field, this is the first time that he has seen greater assistance on behalf of the Ministry of Education. He was encouraged by this change of events.

Escuela de Sagrado Corazón, San Marcos

This institution is operated by the Franciscan Order, and comprises 13 nuns and 40 lay teachers to deliver K-12 education to 450 students. The operation has received generous

support from the GTZ and various sister cities in Germany, and boasts one of the best equipped and well maintained campuses in Central America. The school participates in all MOE model programs, and will likely be designated as a CRA during the upcoming year.

It has a computer lab, more than ample instructional materials in all grade levels, and shows a less than 10 percent dropout from ages 6 to 18. The nuns have mobilized significant parental involvement in school operations, despite the fact that its service area is comprised of marginal residents, mostly single parent households characterized by high rates of gang, drug and criminal activity.

Escuela Rural de Samaya

This rural school in a very poor area is housed in a community center building and serves about 160 students in K-6. Grades K-3 meet during the morning hours, while grades 4-6 meet in the afternoon. Teachers work a full day and earn, on average, \$525 per month.

The school operates under the EDUCO system and receives excellent parental participation and support. A new building is being constructed for the school. With the creation of new space, the school director expects that enrollment will more than double since there are already more than 40 overage students enrolled, and only about half the school-age population is currently in school.

Teachers of the school had all received university-level *profesorado* degrees, and the classes observed were well directed, with abundant didactic materials and equipment.

The director was very cognizant of MOE programs and innovations, and school staff members have been intensively involved with the *Asesor Pedagógica* in the expansion of professional development plans and strategies to strengthen the school under the bonus program. This bonus program provides funds for technology, training and equipment, the requirements of which are designed by the school staff, in close collaboration with parents.

Escuela Rural de San Antonio

The school serves a marginal rural population north of San Salvador, with grades K-6. Like other rural schools, it enrolls about 65 percent of the eligible school-age population and has a large percentage of overage students. Well-trained teachers (two of the six staff hold *licenciaturas* (five-year university training programs for teachers)) are aided by a full complement of materials, learning resources and well-maintained equipment. The president of the parent's council was immediately available at this EDUCO school, even though the visit was not pre-announced. And although the council president had completed only two years of schooling himself, he was extremely knowledgeable about school affairs and praised the faculty often.

III. Institutional Profiles

UMA (Universidad Modular Abierta/ Modular Open University)

This six-campus institution headquartered in San Salvador offers a *profesorado en educación parvularia* (associate's degree in preschool education) to about 400 students. The pre-service program is a three-year curriculum that is neither modular nor open. Evidently, after a decade of operation the Ministry viewed the institution as a diploma mill and required it to adapt to a conventional class/lecture model in order to remain accredited as a teacher training institute.

The Faculty of Education comprises 50 professors, of which 60 percent are full time. Their pay rate is slightly above that of a public school teacher with five years of experience—about \$450 a month. There are no teaching or reading experts, nor are there any classes specifically devoted to the teaching of reading. There are no distance teaching methods or resources, except for one computer lab in San Salvador that is barely functional and not used for purposes of the teacher training curriculum.

The UMA is financed entirely by student tuitions of about \$40 per month. The university has never been contracted by any organization to conduct teacher training or research in the field.

The UMA has neither the instructional, management nor the financial capacity to operate as a host of the Center of Excellence program. Its programs are restricted to preschool teacher training and instructional programs, and resources are marginal. There is no need for further follow-up with this institution.

Universidad de El Salvador

The university's vice rector noted that the curriculum for teachers' pre-service programs is developed and mandated by the Ministry of Education, and is not always appropriate in content.

The pre-service program is three years in length, and there are no master's or doctoral programs available in teacher education. The university is deficient in mathematics and sciences. The vice-rector especially cited math as the highest deficiency. Seventy percent of the teachers are graduates of the School of Social Sciences. The vice-rector reported that El Salvador currently has 12,000 unemployed teachers.

The university has three campuses throughout the country: in Santa Ana, the central campus in San Salvador and the San Miguel campus, which offers diploma and alphabetization programs.

The university is located in a noisy urban section of San Salvador. The campus was dirty and in poor physical condition. One building was abandoned and dilapidated. Other

buildings in use were affected by the recent earthquakes and had visible cracks in the walls. This university would not be appropriate for a Center for Excellence.

UDB (Universidad de Don Bosco)

The education program at UDB includes three *profesorado* diplomas¹ in the areas of preschool, basic and special education. There are 187 students enrolled in the three programs. The university has extensive involvement with distance education programs provided through the Salesian network which focuses on vocational-technical training at the secondary level.

Geographic coverage of UDB is restricted mostly to the area surrounding Sapoyongo, the central campus. The school offers a smattering of in-service training for teachers in the area—but only periodically. Aside from the institution’s connections with the Salesian network, it does not merit further consideration for the Center of Excellence as the institution’s primary focus is on vocational-technical instruction.

UCA (Universidad Centro Americana)

UCA offers three programs which concentrate in preschool, special, and basic education. It is in the process of reducing pre-service offerings because the board of trustees has issued a policy to reduce enrollment in light of the nearly 13,000 primary school teachers with *profesorado* diplomas who are out of work.

Therefore, the Department of Education is shifting its emphasis to in-service training and is establishing training (distance education) centers in four remote areas of the country.

The initial goal of these centers is to provide *diplomado* and short-term training services to *maestros populares* (teachers without formal training). Once the centers are established, they will also be used to extend training to all teaching staff in the surrounding areas.

UCA has the largest library in El Salvador and is very well established and connected in the distance training arena. Its foremost relationship is with the REDUC, a Chile-based data and resource sharing, Internet-based program which until recently was supported by the IDB and World Bank.

REDUC offers potential for the Center for Excellence. In addition, while UCA is playing a much-diminished role in pre-service teacher training, its connection with the REDUC merits further examination. To date, REDUC is used sparingly by teachers for application in the classroom. Nevertheless, there has been a concerted effort to gather a wide range of didactic materials and make them digitally available to all Latin Americans.

Given the strict orientation of the training program in preparing “whole persons” as teachers, and its reputation for offering very rigid, religious-based teacher training, it

¹ As with all accredited universities, the *profesorado* is a three-year, post-secondary program.

should not be considered a university candidate for the Center for Excellence.

Universidad Francisco Gavidia

Although the interview was pre-scheduled, there was confusion at the rector's office regarding the time of our appointment. Furthermore, the rector had another meeting prior to the one scheduled for our interview, thus impeding a proper interview.

The university is situated on a busy and noisy thoroughfare of San Salvador in older buildings.

FEPADE (Fundación Empresarial para el Desarrollo Educativo/Business Foundation for Educational Development)

FEPADE comprises 48 private companies and foundations dedicated to the support of Salvadoran education. While the principal focus of its programs have been vocational-technical education, through its five ITCA institutes FEPADE has long been affiliated with USAID² and working in various other sectors of education.

Most notable of these activities is the support given the Apoyo a Reforma Educativa (Education Reform Support), for which FEPADE served as a USAID contractor in carrying out three components: mobilizing public acceptance of educational reforms; training teachers, parents and school administrators on implementation of reforms; and conducting research to support reforms.

According to USAID, FEPADE well surpassed project targets, and the organization has been able to consolidate its national leadership role to the point of maintaining a US\$11 million endowment fund to support programs. FEPADE has the financial and program management to execute contracts directly with international donors and includes in its sponsor/contract list, inter alia, USAID, the World Bank, IDB and the Ministry of Education.

FEPADE is soon to be involved with the elaboration of some 15 CRAs. These CRAs will serve to provide in-service teacher training, with various distance education modalities. These institutes should be considered as possible resources or as national models to replicate in other countries via the Center of Excellence.

With respect to reading education, FEPADE has engaged *Prensa Gráfica*, a national newspaper, to publish a section each week designed for beginning readers. The section, designed to complement the national curriculum, is aimed at first-grade students and is available at very little cost to teachers.

FEPADE has also been instrumental in a massive national campaign to solicit books and make them available for school libraries. The organization is also working with national banks to create model schools to provide empirical and theoretical training to teachers in

² FEPADE was established with a USAID grant/contract.

18 isolated communities in the country. USAID recognizes FEPADE as one of the leading organizations in El Salvador and rates it, along with the Grupo ALFA, as a major private-sector actor in education.

One of the strong points of FEPADE has been to organize and involve the private sector in community- and education-based programs through donations and/or in-kind contributions to training and development. They were responsible for creating the Campaign for Books (Campaña de Libros) program which sought private-sector donation of books to schools in coordination with the Ministry of Education.

FEPADE also has been planning the creation of a teacher training institute. In the initial planning phase of the project, this entity has created a pilot project with training seminars for teachers and has performed some informal evaluations of this phase with favorable results.

The organization's financial accountability has been transparent and responsible without any deviations or irregularities. It has maintained this status throughout its existence and enforces a strict surveillance over the administration of all funds. Few organizations of this nature have been able to claim this status, especially over such a long history of receiving funding and providing services.

Thus far, FEPADE could be considered as the one organization to provide the strongest and best-organized link between education and the private sector. It was obvious that the Executive Council (who serve voluntarily and are not reimbursed for their services) is a strong and influential group of private-sector representatives who are passionate about education, training and development. They displayed highly enhanced community-development skills and know-how with excellent communication and public relations skills. Considering that the involvement of the private-sector community is highly desirable for the creation of a Center for Excellence and that the private sector should already have forged a link between education and private enterprise, FEPADE might serve as an excellent partner for developing private-sector participation irrespective of the country in which the Center of Excellence is established.

FUNPRES (Fundacion Pro-Educación Especial/Foundation for Special Education)

FUNPRES is a non-profit organization which specifically addresses special education issues such as attention deficit disorder (with or without hyperactivity), learning disabilities, dyslexia, behavior disorders, etc. Very little work is performed with autism due to lack of expertise in that area. The executive director reports that many Salvadoran schools experience serious problems in detecting basic learning disorders and other special education needs. Educators generally do not know intervention and therapeutic techniques, and special education students do not receive proper care and attention. Informal studies in the country indicate that approximately 30-40 percent of all Salvadoran students are showing symptoms of ADD or ADHD. The objectives of FUNPRES's in-service training for teachers are to: increase awareness of the symptoms associated with learning disabilities, increase awareness of intervention methodologies

to deal with these disabilities, provide teacher in-service training regarding the above, provide in-service training to school psychologists in the application of testing and therapies, provide in-service training to psychologists in general in the application of testing and therapies and provide in-house attention to students with special education needs.

FUNPRES specifically teaches reading and writing (*lecto-escritura*) techniques for students with learning disabilities and works with a reading specialist for special education needs. FUNPRES receives funding from the Ministry of Education to address special education training needs and is currently working in 122 schools throughout the country. It is also working with the Ministry to deal with mental retardation issues and works directly with this special population.

Given that special education components are essential to any Center for Excellence, the expertise of FUNPRES should be considered as part of any teacher pre-service or in-service training program. This organization should be considered as a potential participating organization in a regional Center for Excellence.

IV. Country Capacity

The assessment team discussed with the USAID Mission the comparative capabilities of the various Salvadoran institutions. USAID/Salvador places a high level of confidence in the Ministry of Education, citing continuity, stability and management competency as the main reasons for the MOE's success in meeting current obligations and extending an array of innovations. Also the team was informed that USAID has a long and successful working record with the FEPADE.

As mentioned earlier, the corporate business sector is active in support of educational initiatives. FEPADE and the ALFA Group are important players in the private-sector commitment to education. These are experiences that need to be emulated throughout Latin America.

The National Association of Salvadoran Educators 21 June (ANDES 21 de Junio) is El Salvador's largest teachers' union, with 6,000 dues-paying members and 20,000 sympathizers. The organization is in the throes of a campaign against the decentralization of teacher recruitment, and the hiring and firing by local school committees. The directorate of ANDES is delighted with the concept of the Center of Excellence and pledges its complete support if El Salvador is chosen to participate.

The Organización de Estados Iberoamericanos/Organization of Iberian States (OEI) regional office for Central America has its headquarters in El Salvador. Created in 1949 under the co-sponsorship of Mexico, Spain and Portugal, OEI plays a prominent role in developing and disseminating education innovations in all the Spanish-speaking nations of the Americas.

OEI extends programs in pre-service, in-service, and graduate training for educators. Among its programs are: a series of programs to stimulate reading instruction in Central American primary schools; institutional strengthening of ministries; sponsorship of an inter-university network; training for school directors and other administrators; publications and resource document services; and hosting of a variety of forums, seminars and conferences.

The OEI operates with ten percent dues from participating countries, 15 percent from contributions from the founding nations and 75 percent from program income. The OEI has established an extensive and very credible network among Central American education ministries, universities and the international donors' club. It has extensive experience executing projects for the World Bank, IDB, the Spanish development agency and members of the European Community.

OEI is involved with the establishment of standards and competencies for regional teachers, and has been very active in preparing training programs, at times with local universities and other times independently, for the teaching of reading, systems of evaluation and documentation of various innovations, such as the EDUCO, *Escuela Nueva*, and other multi-grade strategies to incorporate parents and students as learning resources in the instructional process.

In addition, the OEI provides direct technical assistance under contract to ministries of education. In El Salvador, for example, the organization is instrumental in the training of *Asesores Pedagógicas* and the implementation of information technologies in schools. The Centro de Recursos Documentales e Informáticos/Center for Information and Resources (CREDI) publishes a wide inventory of research findings regarding teacher and organizational performance and measurement strategies. It also hosts a very well-developed Web site that contains an extensive database and a virtual library of materials and teaching of reading methods.

The OEI merits significant consideration as a partner in the design and implementation of the Center for Excellence. The organization's experience, breadth and credibility would go far toward establishing the Center for Excellence as a genuinely regional institution and may lay the foundation for its sustainability.

As mentioned earlier in this report, the private-sector cooperation with the education system is a major asset to El Salvador. A visible example is Grupo Alfa, a recently created private corporation comprised of national business leaders led by a well-known businessman. The corporation holds the FutureKids franchise, an international program in computer literacy for children. Through this program, the corporation has created a series of teacher training interventions and programs with the support of Microsoft. With CDs, videoconferencing and follow-up with Internet communication, the Futurekids program extends teacher training on the effective use of instructional technologies to some 70 schools and 1,200 teachers throughout El Salvador.

ALFA has strong linkages to a number of other international, regional and local educational organizations. These include, inter alia, PREAL, COPAIN of Panama, CIEN of Guatemala and the Spanish foundation AVINA, which supports associations and NGOs in the development of solutions for supporting the public sector. ALFA's mission is the provision of services and innovations to primary schools throughout El Salvador. It should be considered a major actor in Central American education innovations. Without question, ALFA merits a role in the Center for Excellence.

Among international organizations supporting educational initiatives in El Salvador, USAID played a pioneering role in supporting educational reform through the SABE project. Now USAID involvement has diminished considerably and the Banks have taken the lead role in education-sector financing. Other donors include Japan, Spain and European Union.

V. Summary

El Salvador is a good candidate to be a host nation for the Center of Excellence, particularly in light of the powerful role played by organizations such as FEPADE and the ALFA group. Even more important is the pivotal role played by the Ministry of Education in education leadership, management, and instructional improvement. In the opinion of the assessment team, this Ministry should be recognized as one of the most effective and efficient public sector entities in Central America. The paucity of programming of universities involved in pre-and in-service training does, however, subtract from El Salvador's many other achievements in educational innovation.

The Minister of Education was very enthusiastic about the Center of Excellence program and feels that El Salvador has all the resources to support such a Center. Similar support was expressed by FEPADE, ALFA, ANDES, OEI and FUNPRES.

GUATEMALA

I. Overview

Guatemala is beginning its sixth year of peace following a United Nations-brokered agreement to cease hostilities in 1996. During this period, primary education services have been restored and extended to most regions of the nation. Significant economic aid packages have been instrumental in this rebuilding process, with an investment of an estimated US\$600 million by international donors. The principal donors have been the World Bank, Inter-American Development Bank, USAID, the European Community, JICA, GTZ, CIDA, the government of Belgium and the government of the Netherlands.

Although the government of Guatemala absorbs operational costs for the nation's 14,000 public schools, there has been very limited investment in teacher preparation, instructional materials and other support programs vital to improving the education system. In recent years, support for schools has decreased as the project cycles for many international contributions are an end. At the same time, GOG tax receipts have fallen precipitously with the drop in coffee export revenue. There are concerns that the Ministry of Education will not have sufficient funds to finish the 2001 academic year. As such, teachers are unhappy about suspended pay raises, especially as the cost of living soars due to inflation.

Pre-service teacher training is provided by 44 normal schools throughout the country. Thirty of these are public, although private support is obtained through student tuition fees. Normal schools have total enrollments of about 14,000 students. Approximately 2,500 are employed in schools each year. Guatemala has nearly 78,000 teachers in public schools.

Normal schools offer a five-year, post-primary (7th through the 12th grade) program of study that includes a limited secondary school curriculum. The final three years are dedicated to teacher preparation. One semester is devoted to teaching methodology, and the last semester is spent as a practicum in selected schools. Although the GOG supports the normal schools, no curricular guidance is provided, and only about five dollars per student is given for instructional materials (including books). The Ministry of Education sets no standards regarding faculty credentials or performance evaluations.

At the university level, almost no programs exist to prepare primary school teachers. Of the six universities, three have education programs. Universidad del Valle does offer a primary school teacher training program though, without incentives to pursue a specialized course of study, students do not enroll and the university has difficulty maintaining the program. MOE does not recognize this primary school teacher training in salary remuneration or otherwise. UVG also offers a primary education program in bilingual intercultural education, supported by international donor agencies, that is presently maintaining successful attendance and graduation rates.

Programs vary at the universities, and various options exist, beginning with: *diplomado* (one year), *profesorado* (two years), *licenciatura* in secondary education (four years), and the *maestría* (five years). All three universities have recently begun offering *diplomado* programs, which are the principal vehicle for in-service training for teachers who plan to remain at their posts.

Diplomado programs are supported exclusively by foreign donors, and are not formally recognized by the Ministry of Education in salary scale considerations. The other university programs prepare secondary school teachers, school supervisors (*Coordinadores Técnicas de Administración*), departmental and central administrators, and university professors.

While there are plans to transform normal school training and to require that teachers complete at least two years at the university level, the Ministry does not now have the budgetary resources to implement this initiative. For example, although plans call for loans totaling \$88 million from the World Bank and the Inter-American Development Bank, the GOG cannot meet counterpart requirements, and the funds are inaccessible. (WB and IDB loans are reportedly awaiting approval in Congress and have not been signed as of yet.)

When these funds are available, the Ministry plans to establish 334 municipal training centers in collaboration with universities and normal schools. The goal is to train 62,000 primary teachers at the *profesorado* level. In addition, about half the IDB loan would be used to train 18,000 bilingual teachers in bilingual instructional technologies. Nearly 807,000 elementary-school students in Guatemala are indigenous-language speakers.

Until these programs can be realized, however, primary education in Guatemala, particularly in rural and indigenous areas, will continue to languish with poorly trained teachers, and inadequate didactic materials, instructional support, and administrative guidance.

The Ministry uses a variety of texts to teach reading and is in the process of effecting major curricular transformation. While the curriculum is ostensibly under design, there are few reading aids in the classrooms. In general, the presence of Ministry programs diminishes in direct proportion to the distance to the capital city, especially in the former civil war zones of the *altiplano*. This area is populated largely by groups who speak one of the 21 Mayan languages or two non-Mayan local languages in Guatemala. (Note: There are three non-Mayan languages spoken in Guatemala: Spanish, Xinca, Garifuna.)

Ministry officials in Guatemala note that the National Council of Reading, which is comprised of about 500 teachers, is the institution with key responsibility improving the quality of reading instruction. However, discussions with council members and other teachers indicate that the only “program” offered by the council is a bi-annual meeting, usually attended by no more than 200 teachers, mostly from private schools near the capital city.

Reading is taught through very traditional primers and portions of texts that are photocopied by teachers. One primary school visited had a total of 350 first, second and third graders, with 18 student texts. As a result, teachers require students to copy text onto notebooks for use in class. Few systematic programs are used to instill reading skills.

An interagency group of international contributors is comprised of 12 foreign agencies that work on education system reform for basic education including preschool and secondary levels. Most of this work has been in response to the 1996 Peace Accords, which specified that indigenous students would receive schooling in their maternal language. Since these programs are region-specific (i.e., USAID programs cover only the Department of Quiché while GTZ concentrates its efforts in Quetzaltenango and Sololá), little progress has been made for most indigenous students. Schools are generally staffed by Spanish speakers who have little knowledge of indigenous languages. As a result, nearly 75 percent of indigenous children abandon school by the third grade, and 90 percent by sixth grade.

No standardized testing programs exist in reading or other subject matters for Guatemala's 2.3 million primary school students

Because telephones and electricity are generally not available in rural schools, there is little use of education technology. However, international donors have provided funds to several normal schools for this purpose. The most prominent of these is USAID's LearnLink program, which involved installing computer labs and Internet access via satellite. In general, however, there is no Ministry program to support the use of these technologies, and no Internet access is offered to elementary schools.

The European Union has helped a local university offer a *diplomado* in special education in selected departments, and 43 teachers are enrolled in an in-service training program. This is the only special education program that was identified during the research in Guatemala.

With the exception PRONADE, the World Bank program that works to create self-governed schools in isolated areas, there is little involvement of parents in school operations. PRONADE funds MOE's *Juntas Escolares* (school boards) program to encourage parental involvement and governance of schools.

Administrators, school directors and most teachers are appointed at by the Ministry of Education or by departmental directors with no local involvement and even less consideration of local language needs. Because teachers are from predominantly Ladino cultures and trained in Spanish-speaking normal schools, they have little in common with parents in local villages.

Although various estimates are offered about teacher involvement in unions, it appears probably that about a third of teachers are actively involved in union activities. Currently, teachers' unions reportedly yield strong negotiating power and can bring down the

Minister of Education with a strike. Union membership is growing as few salary increases have been approved during the last five years.

Mandated in the peace accords, the Consultative Commission for Education Reform is composed of over 25 representatives from civil society who donate their time. Although the commission was created to address education reform and was heavily funded by international donors, the commission appears to have had no impact on primary education. The Ministry has been able to provide funding for salaries and some operational costs, but money for reform efforts have depended exclusively on international donors. These reform efforts have generally had negligible national impact and minimal commitment from the Ministry of Education.

While Ministry officials continue to discuss new initiatives in the professionalization of teachers, there is little hope for budget support for education. Local funding is not available to match bank loans, which could be used to upgrade teacher skills and improve pre-service training, and there is little likelihood that economic conditions will improve sufficiently to provide the Ministry with matching funds.

With these financial constraints, teachers have not received any official in-service training in more than two years. The Ministry suspended programs in early 2000, supposedly to ensure that teachers remain in school to teach. In reality, there have been no funds available for in-service professional development. Although donors did provide funds for a five-day training program in reading and writing skills for bilingual teachers this year, this is the only substantive training program held in nearly three years.

There are very few school libraries. (Perhaps five percent of primary schools have a type of library.) Most books are used by teachers who photocopy materials for use in their classrooms. There is a dearth of learning texts and reference materials, such as maps, dictionaries and atlases.

II. Teacher Training Needs

The Ministry of Education has no pre-service training in reading instruction. According to the persons interviewed, there are plans in the Ministry to provide this service in the future, but no deadline has been established.

Primary education teachers are trained in the normal school system which has no national Ministry curriculum, no standards, no evaluation, and little Ministry support. While efforts to improve the normal school system have been attempted through the Commission for the Transformation of Normal Schools (CATEN), improvements proposed were rarely implemented due to budget constraints. In addition, normal school directors, who have a great deal of autonomy in guiding school operations, expressed little interest.

Given this autonomy, the quality of teacher training fluctuates considerably between institutions and is directly related to the quality control imposed by individual directors.

Because Ministry contributions cannot meet operational needs, normal schools depend heavily on tuition and parental support. This separates the schools more from the Ministry which provides little more than accreditation, teacher salaries, and very modest operational support.

Those normal schools that provide quality education have become heavily dependent on foreign donor contributions to create and sustain programming.

There is no involvement of the Ministry in pre-service teacher preparation. A very small staff is charged primarily with budgetary review of normal school operations. According to Phase I interviews, there is no standard curriculum, no specified or anticipated teacher competences, no national program for texts or teaching materials, and no national measurement system for pre-service teacher activities

In-service training was officially suspended two years ago to assure teachers would be in their classrooms. With the exception of one program to train indigenous teachers on how to read and write in their maternal language, there has been no Ministry involvement in in-service training.

International donor projects have also been instrumental in supporting university-sanctioned in-service programs for teachers. The three universities that are analyzed later in this report offer special degrees called *diplomados*. Participation in *diplomado* programs is totally voluntary. The programs generally comprise 100 to 150 contact hours, and provide teachers with credit toward one semester of university training. They vary in quality, but several have received acclaim among teachers. This model may be made available to all teachers if IDB funds become available.

Diplomado programs concentrate on whole-language reading and other applied instructional technologies. They incorporate follow-up services to promote the use of acquired skills and application of material in the classroom. The first *diplomado* program began in 2000, and to date about 1,500 teachers have participated. As with other innovations, the *diplomado* programs are completely dependent on international donations for their existence. The cost of extending university training to teachers will prohibit continuation of *diplomados* on a self-sustaining basis.

Because the *diplomado* training receives the support of international donors, teachers are experiencing training in instructional methodology for the first time. Moreover, universities that provide the training have been required to undertake significant changes. In the first instance there are few, if any, professors who have instructional technology skills. Most programs were restricted to the main campus in large urban centers, outside the geographical reach of most teachers.

To respond to local training needs, universities have opened instructional centers throughout the country and made strides toward developing human resource capacity to train teachers in light of their very basic needs.

III. Institutional Profiles

Universidad de San Carlos

The Universidad de San Carlos has over 140,000 students in total. More than 2,600 students are enrolled in the secondary school teacher training program on the 11 campuses of USAC, Guatemala's only public university. About 400 secondary school teachers graduate annually. A new program for in-service teachers and administrators, created through a USAID-assisted program, is producing 400 *diplomados* annually.

The main campus is in Guatemala, with very few support resources. Reading is not taught, rather skills in mathematics and the social and physical sciences are the focus. There is no university program to train primary school teachers, except for some in-service programs in areas supported by international donors.

A very limited computer laboratory, without Internet connection, is available for rudimentary training in typing, making spreadsheets and word processing

USAC is the national public university with broad and extensive experience with the Ministry of Education. As a public university, it is subject to the vagaries of political control and the same budgetary shortfalls as the Ministry of Education. Nevertheless, administrators are eager to embrace any role in the Center of Excellence.

While there is a great deal of interest in participating in the Center, a lack of funding, institutional stability and management capability would preclude USAC's participation as a host for the operation. Facilities are adequate but hardly measure up to those of Guatemala's private universities, which matriculate only about 20 percent of tertiary students, versus the 80 percent of university students who study at USAC.

Universidad del Valle de Guatemala

The Universidad del Valle de Guatemala was built primarily with USAID funding. The university has two large campuses, one on the south coast and the second in the highlands. The facilities visited by the Phase I team were situated in a forest-like setting with large pines and ample gardens. The functional modern buildings of the university are situated on a very large expanse of land (about 50 acres). The university's large classrooms are expandable by mobile dividers and can accommodate varying numbers of students.

The university student population is approximately 4,000 students. The university's 52,000-book library is large and has approximately 15 computers on-line for desktop research. The university also has a multimedia center with videoconferencing capabilities and two auditoriums.

The university is capable of housing visiting, out-of-town students in off-campus settings. Overall, the fiscal plant of this university is outstanding and can easily accommodate a Center of Excellence. It has a pleasant, friendly and inviting environment.

The American School of Guatemala is located immediately adjacent to UVG and serves as an on-site, on-the-job pre-service training site for education majors. The American School is very large and comprises Kindergarten through high school academic levels. It is also situated on ample acreage, with approximately 15 separate academic and administrative buildings. The school also has a new large library, a multimedia center and a computer center with immediate access to the Internet.

URL (Universidad Rafael Landivar)

URL is a large modern university set in a pleasant tree-filled setting. Its student population is 10,000. Administrators at URL exhibited little interest in participating in the Center of Excellence project.

Centro de Aprendizaje Mayacam/ Mayacam Learning Center

The Centro de Aprendizaje Mayacam is located in Patzun, Chimaltenango. It is a small concrete building with one large classroom and a separate room that serves as the office and library of about 50 books on Mayan culture.

The school teaches monolingual Mayan children to read and write in their native tongue of Kaqchikel. Mathematics is also taught using the Mayan numbers and symbols, along with Mayan music, textile weaving, and the Mayan calendar.

The school has developed a program entitled *Jugando Aprendiendo*. This method uses interactive games, such as bingo, to teach reading/writing and mathematics using the Mayan language, Kaqchikel. The school reports a more rapid learning rate of three months compared to six to nine months for traditional methods. The games use phonetic techniques along with visual and kinesthetic approaches.

The teachers were trained by the PROMEM (Proyecto Movilizador de la Educación Maya) and by ULEM (Unidades Locales de Educación Maya). These projects are funded by UNESCO. The interviewees did not give an opinion as to the best institution to train teachers in the country. This may be because their exposure to teacher education is limited to the above-mentioned institutions. They do not receive periodic in-service training. No programs exist to deal with learning or attention-based disorders. The school periodically assesses the children's learning rate by giving them appropriate examinations using a game-like methodology. Sixty percent of the classroom time is spent teaching reading and writing in Kaqchikel.

The school would like to have computers to assist them in their pedagogical activities, although there is no specific plan about how the computers would be used. The center has

one computer for the director and the librarian. Other than that, there is no technology in the school, although the Internet is available in the municipality.

Regarding how they would like to benefit from a Center for Excellence, they reported the following:

- Development of appropriate curriculum materials for Mayan populations
- Adequate and culturally relevant buildings (schools) for Mayan instruction
- Expanded teacher training
- Instruction to non-Mayan teachers on culturally sensitive issues and instruction on how to teach the Mayan child
- Reduction of discriminatory practices against Mayans in general
- Appreciation of Mayan culture and science to help boost morale, self-esteem and self-concept

Instructors are passionate about teaching Mayan children, and it was apparent that they want to receive continuing in-service training. The teachers work with the bare minimum, but they use the available materials effectively and with excellent results. A Center of Excellence needs to incorporate a component for indigenous populations, and the techniques used by this school could serve as a model for other schools, including non-indigenous schools.

Escuela Normal Pedro Molina/ Pedro Molina Normal School

The Pedro Molina Normal School is a national school for teacher training. It has a population of 776 boarding and local day students. The student population is housed at the school in dormitories. Students at Pedro Molina speak 15 different languages. The school has a computer center, but, due to cost, is not connected to the Internet.

The main techniques used to teach reading are: eclectic, phonic and general word association.

The teachers at Pedro Molina were trained through a national consortium of universities called Asociación Nacional de Universidades. The pre-service instruction lasted three years with one year for practice teaching. In-service training is available, but scarce. They would like to see this type of training made available more often. Teachers suggest that academic materials and technology are their greatest in-service needs. Teachers' greatest complaint is the low pay teachers receive.

Asked what they would like to receive from a Center of Excellence, they noted:

- Courses on inter-cultural sensitivity and approaches for dealing with children
- Well-selected, competent personnel to provide ongoing quality instruction for in-service and pre-service personnel
- Better subject matter materials, especially for mathematics, sociology, psychology and special education

Interviewees stated that the Universidad del Valle de Guatemala was the best academic university in the country, and if a Center for Excellence were to be established in Guatemala, they would recommend that university.

Escuela Normal De Juan De León/ Juan de León Normal School- Santa Cruz De Quiche, El Quiche

Although this normal school serves the Department of El Quiche, which is comprised of nearly 97 percent indigenous-language speakers, it offers no training in bilingual education. In spite of significant investments by USAID in computer acquisition and teacher training, the institution is limited in teacher training resources and technologies.

Escuela Santa Lucia/ Santa Lucia School-Utatlan, Solola

This normal school has received abundant support from the GTZ in the creation and adaptation of Mayan curriculum. In addition, all instructional resources, which consist mainly of a library of about 400 books, were contributed by the GTZ.

The limited smattering of in-service offerings was also provided by GTZ, which is terminating its participation with this and other normal schools.

The school serves an area of 450 schools and produces 58 graduates annually, none of whom have any training in bilingual or maternal language instruction, even though more than 90 percent of children enter school speaking indigenous languages.

IV. Country Capacity

Ministry officials favor having the CETT in Guatemala. However, financial resources in the short, medium and long term are lacking. Consequently, there are very limited possibilities for MOE to assume either financial or programmatic participation in the Center of Excellence program.

Many primary education programs are supported by two Guatemalan corporate foundations: FUNDAZUCAR and FUNRURAL.

FUNDAZUCAR is the national foundation of sugar growers and is especially active in the cane cultivation regions of the nation. The organization supports in-service teacher training activities sponsored by the Universidad del Valle, which is extending a two-month program to 1,500 teachers at UVG's campuses. FUNDAZUCAR also works extensively with the Ministry of Education's PRONADE (community-governed schools) program that extends primary education to 4,500 schools in isolated areas.

FUNDAZUCAR also provides scholarships for students in primary schools and is a subcontractor to the Ministry of Education scholarship program in the foundation's service areas. Total annual investments from FUNDAZUCAR amount to more than

\$650,000, much of which is aimed at providing didactic materials for teacher training and for elementary students. In this regard, the foundation works with Guatemala's leading newspaper to print a wide array of materials on newspaper stock, at very low cost, for distribution to its network of 560 primary schools. The foundation is eager to support the regional Center of Excellence.

FUNRURAL is the national association of coffee growers and a major NGO in the support and delivery of educational innovations. The organization works with 300 schools to promote and support the Active Instruction (AI) methodology.

The AI system stimulates the formation of student governance and broader student involvement in the learning and teaching process. Most of the schools in the program are multi-grade, one-teacher schools. The effort has received much acclaim as a model to be extended to the nearly 4,000 multi-grade schools in Guatemala. FUNRURAL is an extremely aggressive and well-organized entity.

The foundation has formed impressive collaborations with Colgate-Palmolive and Bell South to provide an array of scholarships to more than 22,000 primary school students, including community learning programs for their parents.

Both NGOs could play a key role in support of teacher training, both in- and pre-service, especially given the impressive service delivery platforms already in operation. The foundations' management systems and their strong commitment to educational quality and access are impressive.

Apart from the World Bank and the IDB, USAID is the principal international donor in the area of primary education. The primary education portfolio lists 11 projects, totaling about US\$4 million in annual disbursements. The current funding cycle is expected to remain the same through 2004.

Activities are concentrated in the former civil war zone, with special focus on the department of El Quiché. Besides a large bilingual education program, which has fostered a number of teacher training initiatives, USAID supports programs to extend computer-based education to normal schools, programs to measure educational change, and policy development efforts. Most of the portfolio's monies are earmarked for the EDUMAYA project, which includes four components (one of which provides university scholarships to about 1,600 Mayan students in 32 different career fields). The contractor for this program is the Universidad de Rafael Landívar. (USAID has also funded a variety of programs offered by the Universidad de San Carlos and the Universidad del Valle.)

V. Summary

Three universities offer the possibility of housing the Center of Excellence: Universidad de Rafael Landívar (URL), Universidad de San Carlos (USAC) and Universidad del Valle (UVG).

URL has an extensive record of accomplishment working with USAID and other donor agencies, and has developed adequate institutional capacity to host the Center. Despite a well-ordered campus, and broad geographic and programmatic coverage, URL demonstrated little interest in handling the CETT. And while URL has won a number of competitions for USAID and other donor monies, the assessment team found little institutional commitment to innovations and programming that are needed to make the CETT a successful and sustainable operation.

Considering the quantity and range of programming, USAC could be treated as a possible host institution. However, there is marginal financial and management capacity to host the Center at USAC. The university would gladly join a consortium effort which, in light of the fact that universities have no involvement with pre-service training and have only just begun in-service programs, will most likely be a necessity in Guatemala.

The overwhelming choice to house Center of Excellence programs in Guatemala is the UVG. Universidad del Valle has a long history of successfully managed US government funds. Its extensive record of contracting with international agencies, as well as the institutional commitment to working with diverse populations, suggest that UVG could extend reading instruction to teachers throughout Guatemala.

HONDURAS

I. Overview

Honduras per-pupil expenditures hover at less than US \$75 per year. Ninety percent of the population has access to primary education, but there is high underachievement, a 37.5 percent repetition rate, and a high percentage of dropouts.³ Students remain in the system an average of five to six years.⁴ There are several efforts to reduce the high numbers of dropouts, like EDUCATODOS, PRALEBAH and Telebásica.⁵ The Ministry of Education dedicates nearly 98 percent of the total education budget to teacher and administrator salaries. This contributes to the state of neglect the assessment team found in primary and normal schools. Honduras assigns 5.7 percent of its GNP to education, ranking slightly above average as compared to other Central American countries.⁶ The various intervening agencies agree that the problem is distribution of resources. As a consequence, there are scant resources for improved programming, in-service teacher training, or learning materials for classrooms.

The nation's 30,000 to 45,000 teachers⁷ are trained only to the secondary level by 12 normal schools. Students must first complete traditional middle-school training (grades 7-10) before entering teacher training courses, which consist of a half semester of studies in pedagogy before they go on to practice teaching in schools near their home community.

Normal schools are very poorly equipped with instructional resources, with few texts or other printed materials, no audiovisual capacities, and only a few computers scattered around with no Internet connections. There is no national curriculum for the normal schools. As with primary schools, the Ministry only provides salary support and in the aftermath of Hurricane Mitch, extensive rehabilitation of school facilities that were funded by foreign donors. Most funds for physical rehabilitation are nearing exhaustion, so these programs will soon terminate.

Efforts have been lagging in in-service training to primary school teachers, and there has not been a focus on improving reading instruction. And since the Ministry has not issued instructional materials to teachers in the last three years, teachers are forced to prepare their own materials, drawing from commercially available primers and other sources. Unfortunately, the impact of support is felt most acutely in classrooms, where students must prepare their own instructional resources by copying from chalkboards.

The national university, the Universidad Pedagógica Nacional Francisco Morazán (UPN), retains a virtual monopoly on advanced-degree teacher training. It alone has the authority to award any certificates or degrees beyond the *Maestro* license, which is awarded by the

³World Bank. Project Appraisal Document on a Proposed Credit to the Republic of Honduras for a HN/Community Based Education Project. Report No. 21851. April 10, 2001a.

⁴Ernesto Shiefelbein. Education in Honduras: A Strategy for Change at Medium Term. Nov. 6, 2001.

⁵IDB, National Education Reform Program. Operation No. 1069/SF-HO. Honduras, December 6, 2000.

⁶World Bank. Honduras Poverty Diagnostic 2000. Poverty Reduction and Economic Management Sector Unit. LAC. Report No. 20531-HO. June 29, 2001.

⁷ The figure varies, depending on the source.

normal schools. UPN training programs are directed toward teachers seeking other posts, or those aspiring to move into secondary education.

These programs include a new, experimental technical program (funded entirely by the Spanish Development Agency), the teacher license, the B.S. and the master's degree. Other than the technical degree and some small projects funded by external donors, there is no in-service training offered to primary school teachers. UPN is actively involved with design and implementation of the new policy that will require teachers to complete two years of university training.

While this plan is in its pilot stage, all involved in primary education recognize that UPN has neither the financial nor human resource capacity to extend university training to the nearly 2,000 normal school graduates per year. But considering the new role being planned for UPN in the upgrading of minimum teacher requirements to the two-year *profesorado*, the institution must be considered as a candidate organization to participate in the Center of Excellence.

Very few funds are available for the planned upgrading of teachers from the donor community or the Ministry, which will almost certainly change its entire staff with the inauguration of a new president in January 2002. Current and planned reductions in the Ministry's finances will impose great hardship on an already inadequate budget.

The Ministry of Education has been decentralized (with World Bank assistance) and organized into 18 departments. However, there is little or no regional autonomy with respect to finance or personnel matters. Departmental administrations have little presence in local schools, and there is no school supervision of any form except for school directors who have no formal training as administrators.

Consequently, teacher performance is abysmal: they are poorly trained, equipped and motivated. Absenteeism is a chronic problem, as are teacher strikes. Of the 210 workdays in the year 2000 school calendar, estimates are that teachers showed up for work an average of about 90 days, with schools often in operation for only several hours per day.

II. Teacher Training Needs

Stakeholders, political parties, government, education officials, unions, and donor agencies, of the country agree that the long-term challenge consists of improving teacher training, filling the gap between theory and the classroom, and providing for continuing evaluation and measurement of classroom performance. Regretfully, the differences show up when attempting to narrow down the strategies to tackle the problems.

The team noted that changes are being planned in the area of teacher training. An initiative is underway to require teachers to complete a two-year university training program that will result in a "teacher" degree. This is to be administered by the National Pedagogical University. It will absorb the newly expanded university student population in four new centers which will be transformed into normal schools. However, given that

the Ministry of Education will likely change leadership, the nascent teacher accreditation improvement process may be delayed. Moreover, UPN lacks additional human resources, didactic support materials, and a coherent plan to execute the new system.

The team also visited teacher training centers (normal schools) and rural schools to gauge training needs as seen by the pre-service and in-service teachers.

Escuela Normal de Danli

This is the only all-girls teacher training school in Honduras and is considered by USAID as the best normal institute. The school trains some 75 teachers annually and offers residential services to 500 girls, ages 13 to 19. Students and teachers of this school exhibit much pride, and a great deal of attention is paid to instilling attitudes of professionalism as well as the technical characteristics of being a teacher. Schools lack instructional material and could benefit from guidance and support from the Ministry of Education. With the exception of the Ministry's payment of salaries for about two-thirds of the teaching staff, the school must depend on tuition and parental and community support to survive.

Course offerings are lacking. For all purposes, these courses do very little to prepare students for the classroom into which they are immersed immediately after beginning their studies. To the school's credit, the staff does inculcate a certain *esprit de corps* among the students. Visiting with several alumnae in a local school later, it was obvious that the graduates have a strong sense of professionalism and dedication to teaching.

Escuela El Pescadero, El Paraiso Department

This four-room school is in a relatively prosperous agricultural area near the Nicaragua border. With 180 students in K-6, the teaching staff is comprised of four teachers, including the director. There is a collection of some twenty workbooks and texts that serves as the school library, none of which are used. Teachers are all graduates of the Danli normal school, and all are participating in the technical program that is being supported by the Spanish Development Agency through the UPN. They rate the program with much respect, although they are being taught not by UPN staff, but by several of the normal schoolteachers under which they were originally trained.

The assessment team found the school to be in a very poor state of repair, with raw sewer water draining onto the playground. Although it was impromptu, the visit lasted about 75 minutes, during which the entire student body was in recess. Children reported that the school is frequently closed and very often opens late and closes early, and that teachers are often absent, as are the children.

Teachers are in the classroom an average of one-eighth of the total scheduled time. Although there is no objective survey, during 2000, teachers worked an estimated 100 school days—that is, two- to four-hour working days.⁸

⁸Aimee Verdisco. Educación en Honduras. Se debe comenzar por lo básico, BID, unpublished, 2001.

There were no Ministry-provided texts or workbooks in any of the classrooms. There was only one 15-year-old flip chart provided by a long-past USAID project. Aside from that resource, all instructional materials were made by teachers and students—mostly by students who copied material into their workbooks.

Cuarto Distrito Escolar De Comayagua

A project site of USAID's Salvemos Primer Ciclo was visited. The program's objective was to reduce the 22 percent dropout rate among first graders. In the past school year, the dropout rate among first-graders has been reduced to 12 percent as a result of the program's intervention strategies with the students. It is hoped that by the end of the 2001 school year, the dropout rate will be reduced to 8 percent.

The principal pre-service reading methodologies that the participants received were: storytelling (memorization), word/picture/alphabet, and learn/play techniques. No real systematized methodologies other than the above were given to the teachers.

Most of the participants received their training through normal schools and the UPN. Strengths of these institutions included: low tuition, and passionate and dedicated professors who took interest in the learning process of their students. There were several weaknesses, including teaching programs that were too broad based, and the lack of specific methodologies or innovative methods to teach reading.

All teachers felt that the UPN was the best school for teacher training in the country. They receive training two or three times per year, but are not consulted as to what type of training they need. There are also no incentives for teachers to participate in in-service training. Methodologies tend to be inconsistent, and no new methods are conveyed to them. However, they do take the instruction to the teachers in the field and train them. Priorities for in-service training reinforce math and Spanish instruction. There is a need for more practical applications for teaching reading that include more and better instructional materials. Available materials are mostly outdated.

Most teachers have to create their own materials because the Ministry of Education does not provide them with new or updated materials. The bilingual programs in the country are directed to the Garifuna populations of the Atlantic coast and other regional languages. No specific special education programs are in place in their school districts. Teachers have unanimously voiced their concern for the lack of special education.

Evaluation of reading is limited to examining notebooks, and no formal evaluation system is in place. Seventy percent of the subject matter taught is dedicated to reading, and 30 percent to other subjects. There is only one computer available at the district office, and 15 schools have at least one computer.

After the interview we visited two rural schools. Each school had two teachers and two multi-grade classrooms. The students were uniformed and orderly. The teachers had

divided the students according to their grade levels. Each classroom had charts with the subject areas the students were being taught and a grade measuring whether they were fast learners or slow learners.

III. Institutional Profiles

UPNFM or UPN (Universidad Nacional Pedagógica Francisco Morazán/ National Pedagogical University-Francisco Morazán)

UPN is the primary institution for non-primary teacher training in the country. It enjoys legislative authority in the National Congress. It has a total student population of 17,912 students divided in three campuses throughout the country. UPN has post-graduate programs offering the following degrees: master's in curriculum development, education, geography, educational development, educational mathematics, and gender and education studies. The university also operates a foundation called FUNDAUPN, which has offered training in the areas of formal and informal education on a national scale. The training programs have trained 6,500 in-service teachers and professionals from NGOs and governmental agencies.

The UPN has an evaluation department and a department for curricular development. The objectives of these departments are to improve the quality of education through the design, planning, promotion and development of the university's curricula. From these objectives a plan for curricula improvement has been created along with a manual for implementation. Included in this process is research being conducted to determine learning styles of pre-service students, teaching styles of pre-service students and practicum and curricular guidelines.

The department has created testing instruments to measure academic objectives reached in Spanish and mathematics in grades 2-6, factors associated with academic performance for principals and teachers, and students and parents. These testing instruments have been administered in four national evaluations. Results of these evaluations provided information regarding: academic performance in Spanish and mathematics; critical factors associated with academic performance; information regarding the testing of academic achievement in Spanish and mathematics; creation of a didactic strategic plan for improvement of Spanish and mathematics; and subsequent in-service training regarding these courses.

The university is developing an Intranet to link all campuses in the country. These services are listed as follows: access to the World Wide Web, e-mail, FTP in both directions, on-line application for the admissions process, access to secured access, academic portals and videoconferencing. Given these programs and the level of enthusiasm for educational reforms, the UPN is the institution of higher education to be considered for the Center of Excellence.

FEREMA (Fundación para la Educación/ Foundation for Education)

FEREMA is a foundation created by the Maduro family (a presidential candidate and head of one of the wealthiest families in Central America). It is sustained by the Maduro family, USAID, and the Honduras private sector. The general objectives of the organization are to transform the education system. Specific projects include the support of education reform through PREAL, which has also provided some financial assistance. The foundation created the radio broadcasts that teach math to children (USAID-funded). Soft drink manufacturers provide the materials for the students.

The program has been very successful. The important aspect of the foundation is that it involves the private sector in the community education projects and has worked very closely with FEPADE and Alfa Group in El Salvador. The foundation has donated \$250,000 for awards of 1000 Lempiras to each student with excellent grades in reading. It has also contributed to the establishment of classic reading book libraries (about 90 books per library) in 13 rural schools close to the capital.

The executive director feels that UPN is the best (and only) organization of higher education to provide pre-service training. However, she echoes the same criticism previously heard about the gap between theory and practice. This affects the quality of education at the local level. Teacher salaries are too low, and the teachers in general are not motivated.

She also stated that there is little social marketing for education and the only newspaper advertisements promoting education are published by the foundation. Incidentally these ads have won publicity awards. Another social marketing campaign for education has been launched by banks promoting education as the basis for the development of the individual and the country.

FEREMA should be considered an institutional ally for the Center of Excellence and could easily be incorporated as a private-sector initiative along with FEPADE and Alfa Group of El Salvador.

Escuela Zamorano (Pan-American Agricultural School)

Tim Humphreys, the USAID Director, recommended we visit the Zamorano school, which has gained an international reputation as a center of excellence in agricultural training. With 1,000 residential students from 24 nations, mostly from the Western Hemisphere, the school is recognized as the leading practicum-based program in Central America. Students conform to rigorous disciplinary standards but are trained in all facets of agricultural production and management. The school benefits from excellent collaboration between US universities, most notably the University of Florida at Gainesville, international foundations (especially the Kellogg Foundation, which has

invested extensively in the Zamorano school over its 55 year history), and pan-national businesses, such as Monsanto and Cargill Corporations.

The Zamorano model offers much potential as a single site entity for the Center of Excellence, particularly if the focus of the center is to provide intensive and quality programming to university-level instructors.

MERECE

The MERECE group is a coalition of the following donor agencies who originally came together after the Hurricane Mitch disaster: USAID, the Spanish Development Agency, GTZ and JICA. To avoid duplication of efforts, the group meets regularly to coordinate what each country is contributing. The coalition has continued to collaborate beyond the disaster recovery efforts.

The Spanish government is investing approximately USD\$1,200,000 in basic educational needs in the country. Programs being funded are: long-term, university accredited courses for teachers (these are conducted with cooperative agreements with local universities); short-term courses that deal with education reform; new technologies in the information and communication field with classroom applications; curriculum development; evaluation and supervision of the education system; institutional involvement; and administration of educational centers.

According to the director of the Spanish Development Agency, UPN is the best in-country training institute. The Spanish government is providing in-service training to 1,900 students and has a cooperative agreement with the UPN. Pre-service students at the UPN receive a *técnico* in basic education degree. UPN has trained coordinators to make sure that teachers are implementing the proper teaching techniques. Students must have 1,260 practice hours accumulated before they can graduate. The director reported the poor quality of the faculty and the books being utilized as the main drawbacks of UPN's program, and emphasized that there is no supervision by the Ministry of Education of either the school or teachers.

GTZ is active in the creation and implementation of the new curriculum to train teachers toward a mandatory, university-level teacher degree. The German organization is housed in the UPN, and has devoted significant resources toward the creation of learning resources and human resource capacity to train new teachers from the normal schools.

JICA has invested heavily in a building in Tegucigalpa that has gone virtually unused since construction was completed two years ago. The Japanese fund director is most frustrated with the lack of use of the INICE center, which was to have served as a regional (Central America) in-service teacher training center, and asked that it be considered as the headquarters for the Center of Excellence.

IV. Country Capacity

The USAID Mission has an annual budget of \$2.5 million and is investing in three operations. The largest project, EDUCATODOS, operates in 11 departments (Honduras has 18 in total) and is aimed at out-of-school and overage children. Using a mix of interactive radio and volunteer teachers, the project offers 100 class days per grade, permitting children to accelerate their learning toward completing the sixth grade.

The Mission is also constructing nine new centers, and working in collaboration with the Ministry of Education and the Mexican Government, bringing Telesecundaria or Telebásica to 36 schools.

Mission personnel noted that the current Ministry of Education will change management after the inauguration of a new administration in January 2002. They noted that the UPN should be considered as a potential host for the Center given the director's vision; the institution's experience as a project execution agency; and its critical role as a teacher training organization as Honduras shifts from normal schools to universities.

Federación de Organizaciones Magisteriales/ Federation of Teachers' Organizations

FOM is the principal teachers' union of Honduras. There are six other minor unions. FOM membership is 20,000, of which 18,500 are active. They provide intermediary services between their membership and the Ministry of Education. The union negotiates salaries, labor conditions, logistics, and curriculum development and implementation. FOM provides life insurance and personal loans to teachers in need. The union has 135 representative offices in 18 departments to assist the teachers in their needs and to offer proper representation.

The union provides training and continuing education through professional seminars and workshops. It has a training department that works exclusively in this area. Covered areas include: pedagogical topics, gender issues, and human rights. There are currently no innovative reading techniques or methodologies.

It should also be noted that the average teacher's salary in Honduras is higher than those in developed countries. Teachers' salaries have increased 62 percent in the last four years (Verdisco, 2001).

The biggest complaints of the union officials were the following: Ministry programs often get stalled at the management level and do not reach the local and classroom level effectively. Supplies as basic as chalk have to be purchased by the teacher herself. FOM is insisting on education reform and has been in talks with the Ministry, but very little has been accomplished in this area.

The FOM supports the conversion of four normal schools to universities but insists that the process should be planned carefully. The other complaint centered on UPN's policy of concentrating on pre-service training for secondary schools; primary school pre-service is not emphasized. The quality of the teaching staff and distance education at

UPN was questioned. Officials at FOM also did not feel that the USAID Salvemos Primer Ciclo is a viable program, but rather a “statistics game.”

FOM is a member of the Central American Association of Educational Unions (FOMCA). FOM supported the idea that the entire union system should be involved in one way or another with the Center of Excellence project. They all provide training and technical assistance. The FOM may represent a potential partner in the Center of Excellence.

V. Summary

Although pre-service teacher preparation in Honduras falls traditionally within the purview of the normal school system, there is a movement to upgrade teacher training to the university level. In this regard, Honduras is a step ahead of Guatemala and Nicaragua, and several steps behind El Salvador. UPN offers excellent potential as a national host institution since it has begun programming to be able to offer pre-service teacher training at the university level instead of at the normal school level.

MEXICO

I. Overview

The assessment in Mexico had a different focus from all the other countries visited. Even though the southern part of Mexico (Chiapas) has similar educational problems as observed in Central America, the team concentrated on Mexico's capacity to become a potential host to the Center of Excellence.

II. Institutional Profiles

BENM (Benemerita Escuela Nacional de Maestros/ Benemerita National Teachers' School)

Since 1984, Mexico has raised normal schools to the level of university education, and normal schools have required a secondary school certificate (*bachillerato*) for entry. It has been reported that as a result of this change, normal school student intake was reduced by 50 percent during the 1980s. In turn, this drop in the number of teacher trainees caused a major shortage in the supply of primary school teachers and forced the hiring of untrained high school graduates to serve in areas affected by the teacher shortage—not surprisingly, mostly the rural and poorer urban marginal areas. This situation began to revert in the mid-1990s but left a large proportion of untrained teachers and a need for qualifying courses for teachers such as those from the National Pedagogical University.

The BENM belongs to a network of over 200 public normal schools in the country. Its role is to provide pre-service training for primary school teachers within the Federal District (DF). The title, *benemérita*, refers to the fact that it has been in existence for over 100 years. The BENM, like all the normal schools of Mexico, offer the *licenciatura* degree in primary education. The Ministry of Education prescribes the study curriculum for the four-year, six-semester course, which all public and private schools in the national territory are obliged to follow. The BENM has a total enrollment of 1,030 students and graduates an average of 200 students per year. It has two attached laboratory schools, each of which function with two daily shifts for a total of 1,600 school children. The lab schools are well endowed with computer centers, teaching equipment, and materials suitable for teaching practice for normal school students. All classrooms include a concealed observation gallery where trainees can regularly observe classroom activities.

The training curriculum is divided into three separate but interrelated areas: (a) general education and education theory, and primary school subject area content spread through 35 courses to be completed during the first three years; (b) teaching preparation activities conducted throughout the initial three years that include class observations and project work within schools; and (c) two semesters of supervised teaching practice in schools.

The training curriculum closely follows the official SEP primary school curriculum of 1993.

Regarding reading, the BENM is not much different from other teacher training institutions visited in Central America. The course curriculum covers teaching of reading within the subject content area of the primary school curriculum (i.e., Spanish teaching methodology 1). Prior to this, students take courses on child development I and II during the first and second semesters and are introduced to the initial building blocks of reading development—child cognitive development processes in general and the acquisition of linguistic competencies in particular.

One interesting difference is the emphasis that the BENM places on the personal formation of future teachers. During their first and second semesters of training, students take study and communication strategies I and II, worth 10.5 and 3.5 credits respectively. These courses are geared to the development of the student's reading and writing competencies. The rationale of the course is that "only a good reader will become a good teacher of reading."

The teaching curriculum is enriched with other learning resources of the BENM, including the pedagogical museum, the library, the children's library and the tech center. The pedagogical museum is a workroom where students are taught to develop and use a large variety of teaching aids using local resources. Montessori and similar learning techniques such as games, building blocks, origami paper, abacus, and Rubik's cubes are the types of materials made and used by the students. The manager of the pedagogical museum is an enthusiastic professor with a great deal of creativity and zeal for teaching and learning.

The BENM has a well-stocked library furnished with spacious well-lit reading rooms and comfortable work desks. The books are displayed in open shelves freely accessible to the students. The librarian appears to be an experienced and competent professional. A large number of classic texts of historical pedagogical value are kept in a separate secured facility. The children's library is one of the most attractive facilities in the BENM. It consists of an ample room furnished with several children's tables and chairs attractively decorated with colorful pictures.

The library has a large collection of picture books, storybooks, children's versions of classics, songbooks, games and other learning materials. The librarian is an expert in reading development and tutors primary school teachers and BENM students on how to motivate children to read. The library organizes regular events to promote reading among children of local schools.

Finally, the tech center is equipped with a TV satellite connection used to access the EDUSAT signal as well as ILCE programs. The room is also equipped with video playing and recording equipment and a large collection of educational videos. It was mentioned that while the SEP was lagging behind in technology, it is starting to place an importance on distance education.

The evaluation team was impressed with several aspects of the BENM's program. First, unlike most teacher training institutions in Central America, BENM carries out its teacher training task in close connection with the realities of classroom teaching. The existence on campus of two large schools with two school shifts provides students with a permanent site for classroom instruction, observation, and practice. The BENM curriculum is closely linked to the primary school curriculum that includes a clear statement of the competencies expected of primary teachers upon graduation from the normal school. In the absence of high-tech solutions, the pedagogical museum's emphasis on appropriate teaching technology is an important contribution to the enrichment of classroom instruction.

The children's library is a good example of efforts in reading development. While not suitable as a host for the Center of Excellence, the BENM can be a useful resource on teacher training curriculum design and implementation for other countries in the region.

Universidad Anahuac/ Anahuac University

The number of students attending the university is 5,116, with 300 boarding. Twenty-one thousand have graduated with bachelor of arts degrees, and 2,500 have achieved post-graduate studies. Seven of ten graduates occupy executive positions, and five out of ten have begun their own business.

The university has more than 1,100 teachers who teach over 1,600 courses leading to a bachelor's or master's degree. The Center for Development and In-service Teacher Training offers 40 courses for its teachers.

The university separates its curriculum into the School of Humanities and Arts, the School of Applied Sciences, and the School of Business. The School of Humanities and Arts offers degrees in primary education, architecture, graphic design, communications, law, philosophy and letters. There is a specific master's degree in school administration and a specialty in distance learning.

The university offers two of its main degrees in education, including primary education. However, there is no clear evidence that the university places a greater importance in these degrees than others. So far there have been 1,092 graduates in basic education.

The university offers technical advice via long distance learning to some 90 schools—from kindergarten up to university-level studies—throughout its consortium of countries. The consortium includes universities in Argentina, Brazil, Canada, Columbia, Chile, Spain, France, United States (Duke University, Arizona State University, Texas Tech University and New Mexico State University to name a few), Holland, Italy, Israel and Switzerland.

The Anahuac University is presently reviewing a Spanish software program for reading and mathematics. It is also looking for new methodologies to include in its syllabus. The team noted nothing in particular about reading programs.

The university offers pre-service education using both face-to-face lectures and distance learning. It also provides in-service training for teachers already in its system (but not those in the public system). The idea is to continuously offer education to all students.

Each course curriculum and learning materials develop a structure for distance learning. At first, the student is given a video that arrives by mail to his/her home, with CDs, workbooks, and whatever material has been assigned for that particular discipline and semester. Also included is the text, “How does a student learn at a distance?” This provides students a format to follow for quickly adapting to this mode of learning.

The second phase, situation learning, begins once the student has advanced in the course. Students study using real cases as examples. Learning is theoretical and practical—through essays, mind maps, and group work via forums of discussion (chat rooms) whereby students answer and give opinions on each other’s commentaries. All the course design is student-centered with the teacher serving as a facilitator. The courses provide wide multimedia options such as videoconferencing, Internet and CD programs. The idea is to make education as personalized as possible. The established network of schools also provides the student with the opportunity to benefit from conferences sponsored by UNESCO.

The university’s technological structure is run by a fiberoptic network. Connectivity is simultaneous via multiple unity points directed towards different remote classrooms. Within the main campus there are 24 virtual classrooms with ISDN protocol and REAL interaction so that the student can see the teacher. There are also 16 regular classrooms for lectures with more than 500 computers throughout the campus in Mexico City. The university is the only of its kind to have developed a “virtual university” with digital technology and Internet for more than 3,000 students, on-line with 50 different programs, available in Mexico and in the consortium worldwide.

The university has two libraries with more than 100,000 books, 900 journals and newspapers, 5,300 didactic videos, more than 500 slides, 600 CDs, and close to 500 titles in educational videos both on laser disk and DVD.

Universidad Anahuac, like all universities in Mexico, has close ties to the Ministry of Education since the Ministry mandates standard requirements for the education degree. According to the General Law of Education established in 1993, the SEP approves all the contents of degrees in education offered by all the universities in the country. Experience with in-service teacher training is rather extensive.

The university is private and has close ties to the Catholic Church. It also receives quotas from member universities.

The dean of the education department and the director of the virtual university were very interested in hosting the Center of Excellence. They felt that the university had all the

technology necessary for the CETT's distance learning component since that was in fact their specialty.

According to the university representatives, their institution has a genuine social conscience, demonstrated by its support of 160 social institutions with more than 130 programs for social work. The idea is to coordinate civil society efforts and the volunteerism of university students with programs in social development and the needs of the population at large, such as in the case of victims of earthquakes. They felt that this philosophy of the university and its ties to international universities worldwide made them excellent candidates.

Though the subject was not broached, the university has grown incredibly from its inception in 1964 when there were only 40 students. There are impressive management and financial capabilities with international counterparts. This is a wealthy school with ample and state-of-the-art technology and other sophisticated equipment in several buildings.

All virtual classrooms visited were impressive with the latest state-of-the-art equipment in computer hardware and software. The classrooms were roomy, with enough space for 30 students in each room, Pentium III capacity computers, Smartboards, consoles to connect everyone, video cameras, and televisions. All personnel are highly trained in the use of technology, and the equipment looked very well maintained.

Though the university's distance learning capabilities are excellent, there were no specific programs to develop reading specialists, nor programs in reading, or even an emphasis in reading. Most of the courses were the typical education courses taught to primary teachers.

Also, being a private university with no experience in training public-sector teachers may preclude the institution from becoming a host to the Center of Excellence. It could, however, serve as a partner assisting with distance learning or any other technical assistance.

UPN (Universidad Pedagógica Nacional/ National Pedagogical University)

The UPN was borne from Article III of the Mexican Constitution, which states: "The Mexican nation has a multicultural composition originally composed of indigenous people." It is thus committed to the education of the indigenous people. The Constitution demands that educational activities have to include "the development of their language, culture, customs and resources." Work began in 1990 to include all ethnicities.

Of its 40,000 students, 12,000 are registered for the degree in education for indigenous areas. There are more than 100,000 actually in service.

The university has six centers throughout Mexico City offering bachelor's degrees in primary education (including a degree in early childhood development) and a master's

degree in education. They also offer a secondary (high school) normal teacher certificate and a normal supervisor certificate.

Primary school education is very important, considering that it works with 76 centers throughout the country in four areas of specialization: primary; pre-kinder; school administration; and educational integration. There are 32 centers located in the southern section of the country offering bachelor's degree in pre-kindergarten and primary education for teachers working in the indigenous area. There is also the opportunity to receive a doctorate in education with the goal of fostering research in the country's educational problems.

Of the one million or more teachers in the country, 100,000 have graduated from this university in basic education. The school of education has 40 professors with doctorate degrees in education.

The reading program of the university introduces the concept of anthropology/language in its curriculum. The idea is to understand the diversity of the indigenous cultures in the country and to recognize its value to Mexican society. Language is approached socio-linguistically, and the university specializes in language and literature, bringing student teachers up to date on the latest tools for teaching these subjects. Research is done in order for students to design or come up with proposed new methodologies and creative innovations in the use of reading awareness and instruction. The institution does, however, stress the development of critical thinking in the bicultural language teaching of indigenous cultures dealing with 64 native languages.

The university has a large distance learning program, and it divides its studies into ten hours of face-to-face lectures and student packages with Internet interactive participation. At the time of the assessment visit, the university had not received funds from the government in order to distribute 50,000 computers to its students.

Initially the distance learning mode caused a large desertion from students. Through a great deal of facilitation, there has been a drastic change in learning. The primary factor has been to generate new techniques in the way students study.

The indigenous awareness courses were introduced into the curriculum 20 years ago. Many students came to the city, and a small percentage returned to their communities. Today, 95 percent remain in their communities.

The relationship with the SEP is very close since this is a public university and has to follow set guidelines. The university has been unable to offer bachelor's degrees to indigenous teachers as the Ministry does not permit it. They do, however, form seminars for learning where indigenous teachers are educated.

Experience is intertwined with in-service teacher training, and there are more teachers being taught in-service than pre-service.

Everyone is accepted into the university, and the most a student will pay is \$200 (Mexican pesos) per course annually. However, no scholarships are offered, and the university receives all of its funds from the government.

The president of the university voiced a keen interest in participating in the Center of Excellence. She felt that the university had laid a foundation in the training of teachers for indigenous areas and could offer that assistance. The university's exchange experience with other countries like the United States, Canada, England, Israel, France and Spain qualifies it to be considered as a collaborator.

The president has been supporting the university since its inception. The institution has achieved recognition in bilingualism (indigenous cultures) and has signed agreements with several countries. Being funded by the government also makes this institution cost-effective.

Given that the university did not house any technology, there was little walk-around although it is a large campus in the city.

Universidad Ibero-Americana/ Ibero-American University

This private university offers a bachelor's degree in education and a master's in educational research. Neither degree has a typical course curriculum because the idea is not to form teachers, but educators. According to the dean of education, most student teachers leave other universities to find jobs in schools; at the Ibero-Americana, they form students as educators to work in different sectors of the society. The master's in education focuses on school administration or executive ministerial positions.

Even so, there is a department of continuous education that offers a variety of courses, like certificates/*diplomados* for teachers in the public sector.

There is no definitive information from this university because its dean was very hostile to the entire concept of Center of Excellence, insinuating that there would be an imposition of the US government. She wanted to know immediately who was to have decision-making powers, how the Center was to be designed, who was to design it, etc. The rest of the interview was largely stilted, and both consultants, along with USAID personnel, left.

DGTVE (Dirección General de Televisión Educativa/ General Directorate of Educational Television)

DGTVE is the division of the Ministry of Education responsible for production and distribution of educational materials and programs through TV and online media. DGTVE defines its mission in terms of improving access, equity, quality and relevance to the education system through the application of technological solutions for the delivery of teaching and learning interventions. The DGTVE claims to be the third largest producer of TV products on the continent. The Educational TV Satellite Network—EDUSAT—is

the signature product of the DGTVE that broadcasts such well-known programs as Telesecundaria, Telebásica, Distance Senior High (EMSAD-Educación Media Superior a Distancia), Distance Secondary Education for Adults (SEA-Secundaria a Distancia para Adultos) and the National Educational Video Archives.

The oldest and best-known program is Telesecundaria. It began in the late 1960s by the Directorate of Audiovisual Education, the predecessor of DGTVE. The Mexican experience with distance teaching spans 40 years; therefore the level of sophistication displayed in the current programs is not surprising. Telesecundaria continues to be the largest program of DGTVE serving over 800,000 students at 12,000 reception sites in Mexico and Central America. The expansion of Telesecundaria to Central America is covered by the terms of the Cooperation Agreement on Matters of Distance Education (Acuerdo de Cooperación en Materia de Educación a Distancia), signed in 1996 between Mexico and seven Central American countries. Through this agreement, Mexico provides the deciphering devices for accessing the satellite signal, the technical assistance to install and maintain the system, and the training of technicians in each country to operate and troubleshoot the system.

DGTVE programs are jointly produced and managed with the Latin American Institute of Educational Communication (ILCE), described elsewhere in this report. DGTVE programs provide an alternative path for out-of-school youth and adults to complete their formal education through TV and online learning. It also provides a vast array of services to enrich classroom instruction and in-service teacher training. The EDUSAT signal is transmitted through two satellites: Satellite Solidarity II, which covers Mexico and Central America; and Satellite Satmex 5, which covers the whole of the American Continent. The EDUSAT signal can be received through eight restricted TV channels using deciphering devices (four administered by DGTVE and four by ILCE) and through open TV (at specified programming schedules) on Channels 4 and 22 as well as the Network of State TV stations. It also broadcasts, through a signal link procedure, on two commercial channels. EDUSAT reports over 24,000 broadcasting hours per year with a daily average of 100 broadcast hours. It reaches some 30,000 reception sites in Mexico and the Americas. The most common reception sites are Telesecundaria schools, technical high schools, teacher centers, normal schools, technological institutes, universities and research institutes.

DGTVE's five operation production lines include: (a) curricular production geared to formal education certification such as Telesecundaria, Distance Senior High School (EMSAD) and the *licenciatura* in education degree course taught through the National Pedagogical University; (b) curriculum complementation, which provides teaching enrichment programs for schoolteachers, e.g., the History of Things series; (c) teacher in-service training providing courses and teaching tools for schoolteachers, e.g., didactic communication series I and II; (d) training courses through TV for various professions, e.g., Tele-course on Information Systems, SEPA Inglés (a SEP ESL course); and (e) community education with programs for the general public on a variety of themes such as family life and relations.

The training function of DGTVE is conducted at the Educational Television Training Center (CETE), established in 1991 with JICA funding. CETE trains some 8,000 technicians per year. Further description of CETE is provided under the ILCE section of this report.

Another unique and valuable service of DGTVE is the Center of Videographic Documentation (Centro de Documentación Videográfica), established in 1997. The Center collects, classifies, and delivers video programs on all school subject areas as well as cultural heritage and diffusion programs. It provides teachers with access to a vast collection of digital images organized in various catalogues. The Center also provides online advice and audiovisual communication and manuals, articles and links to related sites. The Center's archives have recently been incorporated into the National Education Video Archives (Videoteca Nacional Educativa), which is projected to become one of world largest collections of educational images and programs.

DGTVE is managed by its Director General Jaime Tacher y Samarel, a formidable team leader and entrepreneur, who runs the institution in the business-like fashion of a private enterprise. Key staff members include the Director of Institutional Linkages and Audiovisual Development, Rosario Freixas Flores, the head of Contents, Victoria Carmona, The Head of Programming, Norma Araceli Mendez, the Director of CETE, Julio Dozal Andreu, the Director of Engineering, Francisco Xochipa, and the Director of Planning Patricio Luna. They all appear to be highly motivated, creative, and enterprising young professionals.

The evaluation team was impressed with the long-standing experience, the massive amount of services provided, and the technical sophistication of the DGTVE operations. All these features of the DGTVE make it an invaluable resource for the design and implementation of the Center of Excellence. In addition, the Director expressed his enthusiastic support to the Center of Excellence initiative and its willingness to contribute the DGTVE resource, expertise, and experience to the initiative. He also formally declared his desire to host the Center and to make available suitable accommodations for it.

ILCE (Instituto Latinoamericano de Comunicación Educativa/ Latin American Institute for Educational Communication)

Since 1954, the Instituto Latinoamericano de Comunicación Educativa has focused its efforts on developing, with regional cooperation, research in education technology and communication. The key has been to use audiovisual media and resources that help apply information technology in education. ILCE offers courses and certificate degrees. Under the initiative of the Mexican government and the support of UNESCO, the institution was founded and established in Mexico City.

In 1978 ILCE was restructured and its activities directed towards the strengthening of regional cooperation in the fields of technology and communication. In the agreement ILCE was given its own legal status as an autonomous entity with a mandate to serve the

countries of Latin America and the Caribbean. The countries served are Bolivia, Columbia, Costa Rica, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay and Venezuela. It also maintains ties to UNESCO, UNICEF, UNDP, OAS, PAHO, and CREFAL, among others, and it fosters cooperation between member countries and non-member countries. One million students have been enrolled in the institution. It graduates approximately 40,000 graduates per year, and it employs 100,000 teachers.

Both primary and secondary education are very important to the institution. The Red Escolar, which stresses the development of basic skills in reading, writing and mathematics, will be discussed below.

ILCE's main objectives are the use of effective tools and the diffusion of new alternative models and resources to keep pace with constant changes in education and technology. When television, computing, audiovisual materials, and the use of the Internet are combined, the opportunities for learning are unlimited. ILCE uses all of these resources to prepare the type of curriculum needed to provide pre- and in-service of teacher training.

The distance education program comprises a series of different initiatives, among them EDUSAT, which works jointly with DGTVE, and Red Escolar.

ILCE operates five of nine EDUSAT channels. (DGTVE operates the other four.) It also takes part in production, acquisition, programming, and the dissemination of television programs and series. Originally operating with a closed signal, it now has opened to cable television via the Hispanic International Television Network. As such, some channels may be viewed by the general public viewing cable television.

EDUSAT covers most of the American continent via its new satellite, Satmex 5. It provides enriching programs at the curricular level and continuing education courses, with Telesecundaria being one of its most popular courses.

Recently, EDUSAT joined radio channel 117 into the network of channels 112 and 115 in order to broaden the signal of the network and reach the audience who does not have either television or computers. DGTVE also collaborated with the Dirección General de Educación Indígena (Indigenous Educational Network or DGEI) for indigenous communities. Transmission takes place every day for two hours with programs such as:

- *Te cuento un cuento?* (Should I Tell You A Story?), stories written by indigenous boys and girls
- *Jugamos a conocernos?* (Do We Play To Know Each Other?), a program depicting oral history, music and other indigenous cultural manifestations
- *Aprende y diviértate* (Learn and Have Fun), a series on educational themes with interactive activities directed toward teachers and students

The Red Escolar, which is the School Educational Computing Network, is a central initiative for the distance education program. The network offers computer and pedagogical services, using the Internet, in order to facilitate interaction and collaboration between schools, teacher training colleges, and any other organization involved in education. This educational model combines the use of educational television with computer education, through the access to the EDUSAT satellite network and the Internet. The key elements of the system are: access to the Internet; EDUSAT educational programming; and e-mail correspondence.

The Red Escolar provides schools with multimedia computers, Internet connections, antennae, satellite signal decoders, VCRs, TV monitors and a wide range of programs. The network also develops educational software and designs electronic pages to guide users with consultations and activities. Additionally, it encourages academic discussion through its forum of “virtual cubicles” (chat forums) and collective research projects.

ILCE is also in close collaboration with regional entities in such fields of research as curricular design, nonformal and formal distance education, the use of media in education, and strategies in teaching and learning.

Among its most proud possessions is its documentation center (CECTE), which is a center for education technology and communication studies. This center offers courses of specialization, postgraduate degrees, diplomas and workshops. The idea is to support research carried out in the institute and offer an exchange venue with other institutions specializing in different education technology fields.

The reading program at Red Escolar is a series of educational projects that are designed around key themes—one of them language and literature. One of the projects in this area, “Tell me a Story,” is designed for primary school children. Children are chosen in pairs from other schools and assigned stories. Through the network, children discuss, interpret and share opinions as they carry out various activities. This program is for the early primary grades.

Red Escolar has “corner books” in its Internet collection, which are stories for primary grade students and beginning junior high level. Colibri Collection has illustrated narratives for primary children.

Programs to motivate reading such as *¿Te lo cuento otra vez?* are designed to provide pleasure by using stories, myths, informative text and interactive activities. Children are grouped into circles of learning, and they gather to discuss ideas and write them down. This forms a team to promote reading comprehension.

EDUSAT has a reading program for children in the pre-kinder level using the tale of a magical place called *La casa de Wimzie* (The House of Wimzie) where children can learn to know themselves, their family, and friends in a creative and entertaining way. The background is warm and friendly, with music and stories. Each child is taken through

adventures, discoveries and experiments. Through it all each child will feel part of the family formed by Wimzie, Yaya, Rouso, Graciela, Bo, Jonas, Lulu and Horacio. The program airs Monday through Friday from 10am to 10:30 am.

ILCE established an agreement with the Ministry of Education to play a central role in the implementation of the distance education program. The Mexican government has given this program top priority. There are 36 million Mexican adults who, for some reason or another, have dropped out of school at age 15 or older. Hooked on a two-way satellite, the emphasis is to reach the 2,443 municipalities in the country and serve as many Mexican students and teachers in order to impact 20,000 communities. Fundamental to this program is the in-service training of teachers, enabling them to better serve the schools and society.

The *diplomado*/certificate services 2,000 teachers each year. It offers 40 to 65 hours of courses via workshops. For teachers who cannot afford transportation to the municipal sites, the OAS funds travel and the SEP offers other per diem. The courses are free of charge. Among the courses offered are:

- Education of the Media, a package for primary teachers
- Educating for the Future, on how to use technology in education, given to 7,000 teachers of basic education
- Certification and training in basic computer skills
- On EDUSAT, reading, math, science, etc.
- Under PRONAP, eight-week summer courses (running 24 hours per week on TV channel 16)
- For principals in Mexico City, a one-month training course in school administration (30 hours per month)
- For teachers and administrators, the *Sepa Ingles* course (Learn English) on TV channels 12 and 14 (four hours each)

Every two months and free of charge, ILCE edits, publishes, and distributes to users of EDUSAT 34,000 copies of its magazine which presents the whole range of programs transmitted on the system's nine channels.

Teacher training and skills updating are also important to the Red Escolar. Teachers in charge of school media rooms are given technical training in order to understand the technology they will use with students. Coupled with these courses are pedagogy courses that help teachers analyze the proposed models. These media room teachers then share their knowledge with other teachers in their schools. Initial training is an on-site workshop, followed by remote support. There are on-line courses for teachers in information technology and key pedagogy courses. They usually cover a range of topics based on the new approaches established by the Ministry of Education study programs.

This institution is supported through federal funds (50 percent), local funds (30 to 40 percent) and community funds (10 percent).

The institute has a proven management and financial track record. It has grown by leaps and bounds, and is still expanding. Its impressiveness lies in the fact that all is free of charge, with the exception of the products ILCE produces on video, cassettes and CD-ROMs.

The chief officers of the institute voiced a keen interest and desire to host the Center of Excellence. They feel that the institute is a powerhouse in distance education programs and has an incredible repository of technological material. They want to collaborate with the Center and feel that their years of experience and regional connection can be very useful in getting the Center off the ground. They also welcomed the opportunity to learn new and innovative methods in teaching reading.

ILCE is very impressive. In the next five years of its mandate, it plans to design 167,583 electronic pages to support its existing educational network. All of the buildings and equipment are well maintained. Japan donated the television center, and all of the equipment appeared new and state-of-the-art. Both consultants agreed that ILCE should be considered a serious candidate for hosting the Center of Excellence.

The Technological System of Monterrey

The Technological System of Monterrey (Monterrey Tec) is a higher education institute specializing in technological education, research, and technical services. Established in 1943 as a technical school, it experienced a fast expansion during the 1970s to become a multi-campus system both nationally and internationally. Monterrey Tec has now become a network of 30 campuses spread from Juarez to Chiapas and with 16 regional branches in Mexico and 10 in Latin America. Monterrey Tec also has offices in the US, Canada, and Europe. It reports an estimated 95,015 students have been taught by 7,114 faculty members, and has had 113,015 graduates since its inception.

Although it is a private institution supported and managed by business leaders, its institutional mission is closely linked to Mexico's social development. Since 1986, the Monterrey Tec began to utilize satellite communication to link up its campuses—first those of Monterrey and the State of Mexico, and then the whole network. In 1989, Monterrey launched its Satellite Interactive Education System (SEIS) with the purpose of upgrading the qualifications of its own faculty, a prerequisite for accreditation by the Southern Association of Colleges and Schools (SACS) which the Tec was seeking to enter at the time.

The limitations of satellite communication that requires a fixed viewing time and place (synchronic system) made it necessary to introduce computer-based multimedia instruction systems. These give learners flexibility of place and time for study. Thus the Virtual University (UV) came into being in 1996.

The Virtual University was the sole focus of our visit to Monterrey. The UV defines itself as a higher education system based on cooperative learning supported by telecommunication technologies and computer networks. The UV utilizes six satellite

channels from six broadcast sites to reach 931 reception sites in Mexico and 63 in 12 Latin America countries, including five countries in Central America.

The learning approach of UV includes three components: instructional via satellite and videoconferences; self-learning; and cooperative learning.

Currently, the UV runs graduate studies with 6,528 students; undergraduates (*licenciaturas*) with 6,814 students; and business training with 41,453 trainees. It also operates social development programs as follows: teacher and school director training (12,824 participants); social organizations (932); public administration employees (3,110); journalists (335).

While the majority of the UV's programs are related to business studies, engineering and enterprise administration, its involvement in the field of education is quite significant, including its master's of education program and its doctoral studies in education technology. The UV also runs a considerable in-service teacher training program that includes three components: (a) Program for Teaching Skill Updating (PAHD); (b) Program for the Development of Administrative Skills (PDHA); and (c) Teacher Education Upgrading (AME).

PAHD (Programa de Actualización de Habilidades Docentes) is an in-service teacher training program for teachers in basic, secondary, and higher education seeking to update their teaching skills by introducing them to education technology and ICT applications. It covers the areas of teaching planning, teaching and learning models, learning evaluation, attitudes and values, and education technology. The program is currently serving 30,000 teachers in Mexico and other Latin American countries. PAHD is sponsored by an alliance of several partners, including: federal and state SEP, ILCE, OAS, and the Ford Foundation.

PDHA (Programa para el Desarrollo de Habilidades Administrativas) is geared to directors of educational institutions to strengthen their administrative and leadership skills and introduce them to education technology to improve the quality of education. The same partners sponsor PDHA as PAHD, and it has served over 1,000 directors.

AME is an initiative that resembles the Center of Excellence initiative. The program is financed and managed entirely by the private sector, including several partners led by the Cisneros Group, a large business conglomerate based in Venezuela. The objective of the project is to upgrade the teaching skills of basic education teachers in seven Latin American countries using the distance teaching methodology as other ICT resources. The UV provides the design of the teaching program (a version of PAHD) and broadcasts the signal from its virtual classroom in Monterrey. The signal is beamed through a satellite connection provided by Galaxy Latin America and it reaches the participant schools through Direct TV.

Teachers organized in small groups receive the transmissions, carry out assigned tasks, and interact with AME through e-mail, forums, and chats from its Web page. The AME

Web page also offers teachers a variety of learning resources, teaching ideas, and answers to their requests for specific technical support. The project has been implemented on a pilot basis during 2000 and 2001, reaching some 150 schools in seven countries. Cisneros is planning to expand the program to the whole region in 2002.

The Monterrey Tec Virtual University has all the experience and capabilities to host the Center of Excellence. The director and staff interviewed did not specifically express an interest in hosting the Center, but they did mention several areas of technical assistance that they would be capable of providing. Monterrey Tec costs appear fairly high, but they seem to have been able to attract many public and private-sector clients on the basis of the quality of their work. Doubtless their main strength is in technological education at undergraduate and graduate degree levels, but their AME project with Cisneros has exposed them to primary education, learning systems and issues. The evaluation team, while not recommending it as a host for the Center, believes that it can be an important source for advice and technical assistance.

III. Country Capacity

The Ministry of Education is actively seeking to foster excellence in teacher training. President Fox's administration has made quality education a key issue. After many interviews it was apparent that Mexico is investing time, effort and money to provide the necessary courses and programs so that teachers can gain personal and professional growth. The new directive for the distance education program highlights the appropriateness of enhancing teaching skills through a medium that reaches everyone at a minimal cost. The way most of the universities, as well as the powerhouse institutions like DGTE and ILCE, have made programs available to teachers underlines the decentralized manner in which technology is being brought to the localities of its users.

School administrators and education supervisors are being offered opportunities to further their knowledge in school management. Many interviewees expressed the opinion that teachers' unions are a barrier to these opportunities for professional development due to reported issues of internal corruption.

There is a wealth of institutions willing and eager to participate in teacher training in this venture. The Universidad Pedagógica leads the way in multilingual primary teaching, and its teacher training curriculum for indigenous cultures is a good starting point when focusing on the issue of bilingual teaching. Mexico offers innovations in bilingual/bicultural programs for indigenous populations, and its experience would be very helpful in the assistance program designed for other indigenous cultures such as the ones in Guatemala.

The Director of the *Escuela Normal* in Mexico City welcomed the idea of a Center of Excellence focusing on reading. He considered that reading was an area that needed strengthening, and training teachers to become reading specialists was key for the overall development of the country and the quality in education.

There was no exploratory research related to gaining financial support. However, the public institutions like the Universidad Pedagógica Nacional, DGTVE and ILCE were keenly interested in hosting the Center or at least collaborating with technical assistance, programs and distance education. There is already a large repository of educational material and programs in reading. All that is needed is the establishment of a network for the Center with all countries in Central America and recovery methods, techniques in teaching children how to read, and activities designed by them.

Unless some form of tax relief is advocated, the private sector will unwillingly supply much of the funding for this project. However, multinationals are interested in helping. USAID/Mexico in taking advantage of the USAID/Mexico's ALO program and its expansion through the TIES (Training, Internships, Education and Scholarships) by seeking synergies (basic education will be a major focus). They also wish to capitalize on Mexico's tremendous investment in research and development, and actual programming as a net gain to the U.S. Government's seed funding.

In the division of labor between IDB and World Bank, the Bank finances basic education programs while IDB focuses on preschool and secondary education. At present IDB is operating a Project Preparation Facility (PPF) for a community-based preschool education program in isolated communities where no formal schooling is available nor justified due to the small number of school-aged children. The preschool education project is in the appraisal stage. IDB is also preparing a project aimed at expanding the coverage of the senior high school level, which is considered to be lagging behind basic and junior high education. IDB is particularly interested in the development of scholarships and education credit programs to assist in solving the financial limitations that prevents youths from completing their formal education.

Ms. Paulina González-Posse, from the Washington IDB headquarters, has been acting as the education projects officer for the past several months. She expressed her support for the Center initiative.

There is a very strong interest in forming the Center of Excellence with ILCE and DGTVE together or ILCE alone. ILCE is a public institution with public and private funds and willing to commit to the new venture. With President Fox's support for quality education and focus on teacher training (as noted in the proposed Plan Puebla-Panama), there is no doubt that the political will to support teaching reforms is evident.

Mexico's powerhouse institutions are capable of addressing teacher training issues throughout Central America. It has impressive distance education programs and agreements already established between all interested countries. It has established ties and relationships, as well as years of experience in providing education programs to everyone in the country. It is definitely a resource that has to be considered for support to the regional teacher training initiative.

IV. Summary

As a resource in the reading readiness program to be designed for the Center, Mexico can greatly contribute with what it already has in terms of its production of educational TV programs for teachers and students, and its innovative and interactive educational software in reading.

The institutions that excel in this area are the DGTVE and ILCE. Both are government enterprises, but each is run like a private firm. Both collaborate with each other on numerous projects, and sometimes it is difficult to distinguish when one begins and the other ends.

All of the institutions visited in Mexico, with the exception of the National Teachers College (normal), had exceptional education technology. It was very impressive to see the technological capacity in classrooms, laboratories, and virtual classrooms. Their distance-learning techniques incorporated Internet, videoconferencing, cassette packages for radio, television, diskettes and CD-ROMs.

Aside from the actual hardware in existence (usually Pentium II or III computers), the software programs that give content were interactive and ranged from CD-ROMs used in each classroom to Internet accessibility through the Redes Escolares and EDUSAT.

The Universidad Pedagógica Nacional is the only one of its kind in the region that trains teachers to understand the indigenous cultures of southern Mexico. The strategies for the multicultural development of the oral and written word are not supported by any extensive indigenous literature. It was mentioned in one of the interviews that this was something that the country still had not fully addressed and that indigenous literature for children was lacking.

The Sindicato Nacional de Trabajadores de Educación/ National Syndicate of Educators is the only teachers' union, and it is a powerful, politically active corporate union. The union has been a disruptive force in the educational system as it wields significant influence on teacher training schools (*normales*). The union has been known to paralyze the country with teacher strikes.

According to a representative of the World Bank, the union manipulates the administration of teachers. Of the teachers in the public payroll, 50 percent do not attend classes. The Ministry of Education does not like confrontations with the union, so it does not forcefully demand teachers be in their classrooms.

Although the technological capacity of Mexico as well as the majority of its institutions is state-of-the-art, there is a sense that the overall quality of education is low. How low is unknown, since most of the testing results are usually not published. Some of the severe criticism lies in the fact that achievement is not measured well and even when done, is not publicized for fear of political reprisals. The SEP does not wish to challenge incompetent teachers, so as to avoid confrontations with the teachers' union.

Testing is deficient and results are not revealed. According to critics, students want only to obtain a certificate/degree, parents want their children to obtain a certificate/degree, and school administrators feel pressure to move students out of classrooms and on to the next level.

In an interview, a World Bank representative stated that Mexico is very heterogeneous, but that its education is standardized. Educational materials such as texts are of poor quality because of the existing monopoly in textbook production.

The opinion of the IDB is less severe. Mexico has targeted distant and isolated areas where there are no more than 100 inhabitants with programs to deal with early childhood development. The programs serve as a way to overcome the lack of formal schools. Through these mechanisms, access to primary education countrywide is 90 percent.

Other achievements involve increases in students graduating from the secondary level, expansion of technical education, and greater critical thinking in teaching students how to identify and solve problems. Also, education technology now reaches all levels and ages, and is easy to transfer from one area to another. There are still some pockets of illiteracy, but mainly in the indigenous areas.

Thirty-six municipalities have 250 centers where teachers, students and the rest of the community receive computer-based training. The World Bank is assisting the Mexican government in reaching all primary students to obtain a formal education. The poorest indigenous areas fare the worst, and the challenge Mexico faces is to overcome these obstacles by the year 2006 when President Fox's administration ends.

NICARAGUA

I. Overview

After ten years of intense reconstruction and investment activities following the tumultuous *Sandinista* period, Nicaragua's primary education system remains one of the most under equipped and antiquated in Central America. Despite massive international grants and loans, enrollment levels (40 to 70 percent of the children of school age, depending on the region) in primary schools have changed little from 1990, when democracy was restored to the nation. National net enrollment in 2000 was 80.1 percent up from 75.4 percent in 1990.

Progress in education experienced a setback when Hurricane Mitch hit Nicaragua in 1998. Entire farms and communities were washed away over the country's northern and northwestern areas; agricultural production was devastated. In one municipality, a mudslide obliterated several communities, killing over 2,000 people and leaving thousands more injured and homeless. At least 1400 school buildings were destroyed or damaged. All in all, Hurricane Mitch decimated one-fifth of Nicaragua's total school infrastructure.

In response to Hurricane Mitch, USAID developed a two-year reconstruction program across sectors. The education recovery program began in October 1999 to help restore or improve conditions for learning in primary schools severely affected by Mitch. Among results of the program reported by USAID were: academic improvement, particularly in reading; reduced aggressiveness; improved classroom discipline; and more active student participation in classroom learning and school activities. Students are very enthusiastic about the vocational training provided as part of the after-school programs.

Nicaragua has six indigenous and Afro-Caribbean ethnic groups living on its Caribbean coast. Although comprising only 11 percent of Nicaragua's population, the autonomous regions cover half of the country's territory. The Caribbean coast (the "Miskito Coast" under British rule) has been neglected historically, with little opportunity for economic development, and limited access to education and health care. As a result, 80 percent of the population lives in poverty. Adults living in rural coastal communities average only 2.1 years of schooling. Thirty-one percent of the urban population and 44 percent of the rural population are illiterate, well above the national average of 21 percent.

Recognizing these gaps, USAID has directed specialized basic education services to Nicaragua's Atlantic Coast regions since 1998. Nicaragua's intercultural, bilingual education (IBE) program was shaped by a series of forums funded by the USAID Mission. Central Ministry officials traveled to the region to participate in an education forum where they met with educators, community leaders, and the two regional governments to define education priorities in the region. Bilingual education was embraced as a means of giving children whose first language is not Spanish the opportunity to study in their own language, as well as to learn Spanish as a second language.

According to the Ministry of Education, Culture and Sports (MECD), average class size in first grade throughout the country currently ranges between 43 and 53. The number of students per teacher drops precipitously for higher grades, since less than one in three students completes the sixth grade. The average (mean) years of schooling for the nation as a whole is 4.9, while in extremely poor rural areas, the number of years of education drops to near 2.0. A population of 900,000 to 1 million preschool, primary- and secondary-level students remains outside the formal education system. At the primary level, approximately 200,000 children are outside the system and are not receiving any formal schooling.

The nation's 5,300 primary schools (which serve a student population of 850,000) are provided with modest instructional resources. In an average rural school, this might include one or two texts and reading primers per grade, for up to 100 students, and very limited didactic supplies. MOE reports that Nicaragua's primary schools are served by approximately 24,000 teachers, about 30 percent of whom have less than normal school-level (12th grade) training, especially those schools in the remote eastern and coastal departments of Nicaragua. The remainder of teachers has been trained in the eight normal schools; however, most observers find these programs to be greatly lacking in both quality and content.

Low teacher salaries add to a morale problem and is arguably the principal issue detracting from school performance in Nicaragua. Public-school teachers earn less than \$70 per month, as compared to more than \$80 in 1991. Consequently, turnover is very high; teachers remain on the job for an average of three years before leaving for work in other professions. The average age of teachers is 21, which contrasts with the median age of 42 for teachers in Honduras, where salaries are four times higher. Low salaries also contribute to the shortage of teachers in Nicaragua estimated at near 10,000.

USAID's BASE project is a national-level investment, and has sponsored in-service support and reform institutions, such as model schools, the national training network and, most recently, resource centers. Improving classroom methods and engendering system-wide reform of teachers' attitudes about teaching methods and learning processes are goals of these institutions, which were set up to be sustainable in the long term.

Despite these interventions and others supported by USAID and other organizations, the assessment team found that, in part due to persisting systemic constraints such as poverty, very low education-sector investment, and politicization, project-specific activities have had little impact in primary schools outside the departments that are served by USAID. Additionally, there appears to be no ongoing infrastructure that can continue to extend innovations after projects have exhausted external funding.

In much of the rural countryside, schools are in a state of neglect and disrepair. Student enrollment is low (in some areas less than 40 percent of school-age students enroll). The fifth grade completion rate countrywide in 2000 was 44.3 percent.

The lack of resources invested in primary education, particularly in remote zones of the country, places the quality of the Nicaraguan educational system near the bottom of hemispheric educational indices, surpassing only Haiti and isolated zones of Guatemala and Honduras. The education outlook is complicated by the politicization of the education system—a legacy of the civil war—that fosters internal dysfunction and unfavorably affects the rational allocation of teaching staff and educational resources. As with its neighboring nations, there is a shortage of trained teachers and not enough schools or resources for a burgeoning school population that surpasses four percent growth annually.

Nicaragua's private sector is organized to assist primary education through two business chambers: AMCHAM, the American Chamber of Commerce, and COSEP, the national chamber. Aside from supporting an adopt-a-school program, and urging the MECD to improve educational policies, the two chambers have little active involvement in primary-school programming.

II. Teacher Training Needs

Normal schools offer a five-year, post-primary (7th to 12th grade) program of training towards a primary-school teaching license. Typically, pedagogical subjects occupy the first semester of the final year of studies, leaving the second half of the year for practice teaching. Several of the *normales* of Nicaragua have reformed their curricula with the help of international donors, and have developed programs that merit replication or transfer to other *normales* inside and outside of Nicaragua. Among those are normal schools supported by USAID's BASE project and Fe y Alegría's Escuela Normal de León in Lechecuagás.

As with other countries that rely exclusively on normal schools to prepare primary-grade teachers, Nicaragua has not generally offered university programs for primary-school teacher education. The only tertiary institution involved with primary-grade teacher training is URACCAN (Universidad de las Regiones Autónomas de la Costa Caribe Nicaragüense/University of the Autonomous Regions of the Caribbean Coast of Nicaragua), which has garnered international credibility for its training programs in support of IBE. The university is working to strengthen normal-school programs in IBE in the Atlantic Coast areas of Nicaragua and Honduras, and is widely recognized as a major university in that field.

Aside from URACCAN, the UNAN-León (Universidad Nacional Autónoma de Nicaragua en León) is actively courting primary teachers for a variety of programs ranging from the *diplomado* to *licenciatura*, and has become a credible institution in the area of primary education. Nevertheless the UNAN-León has very little capacity or interest in training primary- or normal-school teachers, particularly in topics related to reading education.

With one of the more decentralized school governance systems in Central America, the MECD has been active in the development and dissemination of educational reforms.

With World Bank funds provided through project APRENDE, the Ministry has ceded control to nearly 50 percent of local primary schools to committees of parents in local communities. The Ministry also sponsored provision of new texts and is extending in-service programs through various institutions to remote areas where teachers have no formal pedagogical training.

International donors have had extensive impact on selected schools in Nicaragua. USAID/Nicaragua's flagship operation, BASE II collaborates with the Finnish government and the European Union to support IBE programs in the remote Atlantic Coast areas. In addition, BASE II has created and continues to finance a network of 170 model schools. Programs include the creation of training modules and development of a core group of master trainers, with an emphasis on managing multi-grade classrooms, which make up at least half of Nicaragua's primary schools.

In a field visit to the Escuela Rural Madre Teresa de Calcutta, León (Mother Teresa of Calcutta Rural School), the assessment team was able to observe a typical rural classroom setting. This rural three-grade school is about 50 kilometers from Managua adjacent to the Pan-American highway. One teacher was working with nine children, writing on the chalkboard while students copied in their blank notebooks. According to the teacher/director, there were 55 children enrolled in the school, but on any given day no more than ten attended classes.

Physical conditions of the school were appalling. There was no electricity, no running water and no telephone. There were no instructional materials, no lesson plans, no curriculum for grades 1-3 and no system for reading instruction or measurement and testing of progress.

The director complained that at the outset of the school year, more than 100 children enrolled, and three teachers were assigned. But within the first month, a third of the children abandoned school, with another third dropping out by the fourth month. The other two teachers came to work sporadically but continue to receive their \$68 monthly paycheck. The director has no role in their supervision.

MECD supervisors visit the school very infrequently, and are unresponsive to complaints about poor salaries and lack of materials and support are raised. Parents rarely come to any school meetings or functions, save for several mothers who come to prepare the mid-morning meal, which relies on USA-donated (PL480) food. The director felt that without free meals neither the mothers nor students would attend school.

III. Institutional Profiles

INCAE (Instituto Centroamericano de Administración de Empresas/ Central American Institute for Business Administration)

INCAE is a private, non-profit, multinational institution of higher learning founded in 1964 with an initial loan from USAID and through initiatives of the private sector. Its

mission is to provide graduate study in management and business administration, and secondarily to conduct research in regional economic development.

The International Association for Management Education and the Southern Association of Colleges and Schools accredit INCAE. It is also affiliated with the National Association of Schools of Public Affairs and Administration. It is the only institution for higher education outside the U.S. eligible for federal student loans (by the U.S. Department of Education). INCAE is closely associated with the Harvard Business School and with the Massachusetts Institute of Technology (MIT).

INCAE was originally founded in Managua and moved its principal headquarters to Costa Rica after the start of the Nicaraguan Civil War in the 1980s. However, it did maintain the Nicaraguan center throughout the conflict. Presently, both centers operate fully. The organization has a policy to admit no more than 15 percent of its student population from each country.

The research component of the organization is comprised of approximately 30 full-time researchers who conduct regional studies critical for development. This component provides a platform for dialogue between the political and economic leaders in Central America. Since education in the region has been found to be one of the most important factors for development, a good portion of this research has centered on this area.

INCAE has created a think tank, CLACDS (Centro Latinoamericano para la Competitividad y Desarrollo Sostenible/Latin American Center for Competitiveness and Sustainable Development), which is financed with resources from the Central American Bank for Economic Integration and the AVINA Foundation. This new research and program development center has prioritized primary-education issues in the Central American region. The initiative is part of a reorientation of INCAE's mission, which focuses on fomenting sustainable development.

INCAE maintains campuses and business offices throughout Latin America, and operates as a collaborating institution with Harvard and MIT. Together with MIT's MEDIALAB project, INCAE is extending its management capacity and experience to several new initiatives. One such operation is an alliance with IBM, Lego Toy Corporation and other firms in a Digital Nations Consortium.

INCAE is also active in the development of community-development-in-support-of-education alternatives, especially with the Triangle of Solidarity project in Costa Rica, which allocates 20 percent of domestic investment resources to be decided upon and operated by local communities. A third program vector into primary education is INCAE's involvement with Fe y Alegría, which would extend that organization's programs throughout the developing world as a model for teacher training and classroom management.

Finally, INCAE has become an active partner in an MIT-sponsored initiative (MEDIALINK) to extend IT to the transfer of educational technologies to developing

nations. The institute is also working with Fe y Alegría to expand and improve that faith-based organization's capability with respect to teacher training.

INCAE's solid management capability, its history as a USAID-created institute and the organization's newly adopted orientation toward the improvement of primary education merit its consideration as a host for the Center of Excellence.

UNAN-León (Universidad Nacional Autónoma de Nicaragua-León/ National Autonomous University of Nicaragua-León)

UNAN-León is the nation's principal teacher training university, offering a range of program specializations toward a *licenciatura* in secondary education. This is the only university that offers training for education administrators; however, only about 200 students are registered for this course of studies. The rector noted that interest in education administration, as well as teacher credential upgrade, is very high among the nation's teaching and administrative staff. This reported interest notwithstanding, the salary structure for teachers and school directors does not provide any incentive for pursuing professional development.

The near hemisphere-low salaries for teachers are also true for school directors, normal-school professors and public secondary instructors. There is no recognition of advanced university training, in-service credits or any mechanism that remotely pegs salary to credentials or performance in MECD. As a consequence, there is no incentive for upgrading of skills, nor can teachers afford to pay for classes or to travel to UNAN campuses to further their education.

Since UNAN has little to do with primary-school teacher preparation, the teaching of reading programs is not in the curriculum. Although the university has some 400 computers on campus, most are in support of administrative services or for the training of IT students. There are no computer or software programs in support of primary education.

Escuela Normal de León/ Normal School of León

The school is regarded by many as the premier teacher training institute in Nicaragua. It is administered by Fe y Alegría/Nicaragua, and supported by the MECD. The latter provides teacher salaries while Fe y Alegría (FyA) assumes costs for providing materials and teacher supervision.

The FyA system incorporates a high degree of individual and small-group work in training the 480 students who attend five grades in this very rural and impoverished area. Students are charged with governing the facility, including imposition of school fees, disciplinary matters and school maintenance. Classrooms are broken into a minimum of four and often six separate work groups, and students are closely monitored on an individual basis. Although FyA is a Catholic (Jesuit) organization, and religion is a formidable component of training, an ethic of individual worth, coupled with high

standards of scholarship, undergirds the teaching philosophy.

The course of training is supplied by the FyA system, headquartered in Colombia, and has rigorous programs in reading and mathematics. An eleventh grade mathematics class dealing with problems in differential calculus engaged most students in interactive roles displaying knowledge of the topic. The FyA system relies heavily on in-house skills upgrading. The director noted that most of the ten teachers at the school needed at least three years of constant on-the-job training before they mastered the individualized learning system.

If Nicaragua retains normal-school completion as the certification requirement for a teacher's license, the FyA system merits study and at least a pilot and demonstration effort to gauge whether it can be replicated nationwide. Replication to other schools in Nicaragua could well be extended to normal schools in Guatemala and Honduras as well, and to nascent teacher training being introduced in universities in the region.

Franklin D. Roosevelt Normal School in Jinotepe, Nicaragua

The Roosevelt Normal School was founded in 1938 in Managua and, in 1959, was transferred to Jinotepe. The majority of the teachers, with the exception of the principal were trained at this school as teachers. The well-maintained school facilities include a lab with 20 computers where students learn basic computing skills.

The principal and one of the teachers participated in the USAID six-month teacher training project in Tampa, Florida. The principal has instituted the programs of Creating a Community of Learners that was imparted at that training event (along with other valuable instructional techniques) and has created an optimal community of students and teachers. Most teachers were trained in reading and writing techniques, as well as the principal, who was taught a variety of techniques, including phonetic approaches.

One of the strengths at the Roosevelt School was the quality of instruction and the dedicated teachers. UNESCO education consultants provided some of the instruction, which was very comprehensive. The lack of reading instructional materials was definitely a weak point in their training, and this lack of materials continues to be a major roadblock to effective teaching of reading. The students sometimes even lack notebooks or pencils, and the school has had to appeal to local businesses for donation of these items. The Ministry of Education has provided little or no assistance in this area, and the teachers unanimously voiced their displeasure at the inefficiency of the Ministry to provide basic instructional materials. The Ministry does not consult them about their training needs, and training is limited to whatever the Ministry decides is best for them.

One of the weaknesses of the school was the strict admissions policy. Many teachers felt that a number of good teachers were left out because of these criteria.

Although teachers manifest a sense of pride with their profession, normal-school teachers receive very low wages. In most cases, they earn little more than primary-school teachers

(around \$100 per month), even though they have attained the level of *licenciatura* (3-5 years of university training). In order to survive financially, normal-school professors, like teachers, must hold at least two jobs, which detracts from their service outside the classroom and in local communities.

URACCAN (Universidad de las Regiones Autónomas de la Costa Caribe Nicaraguense/ University of the Autonomous Regions of the Caribbean Coast of Nicaragua)

The assessment team felt that URACCAN offers much potential for involvement in the Center for Excellence programs in dealing with intercultural and bilingual education. The institution has earned an international reputation from Mexico to Panama for institutional expertise in IBE programming. The university is involved with two normal schools on the Caribbean/Atlantic Coast. There, the university is offering curriculum design and faculty improvement programs for bilingual teachers who work in five different languages. URACCAN concentrates its efforts among Nicaragua's minority groups, and has been the recipient of various international donor funds, such as USAID (including work under the BASE II project) and the government of Finland. But, the university does not train teachers and therefore would not offer specific teacher training expertise to the CETT.

UNAN-Managua (Universidad Nacional Autónoma de Nicaragua-Managua/ National Autonomous University of Nicaragua-Managua)

The assessment team scheduled a meeting with representatives from UNAN-Managua. University officials arrived an hour late at the meeting site, and then declined to be interviewed. The assessment team was, nevertheless, able to speak with a member of the directorate of AMCHAM, who is program director at UNAN-Managua in charge of several research efforts and model-school programs. Through this contact, the team learned that UNAN-Managua does not offer any substantive curriculum or programs regarding primary education. A full profile of this institution was not able to be prepared.

IV. Country Capacity

USAID is the principal international investor in the improvement of primary education in Nicaragua. The flagship project, BASE II, has been in execution since 1993 to improve a broad spectrum of MECD-sponsored programs. It has provided funds for decentralization, teacher training, ministerial strengthening, management information systems, school mapping, and more recently, multi-grade and bilingual/intercultural education. BASE II has shifted its focus to working with selected normal schools and the creation of model schools nearby that can serve to extend principles of multi-grade training to normal-school students and offer in-service training to already-certified teachers.

With respect to bilingual education, BASE is working closely with URACCAN to provide better normal-school training to teachers entering communities that speak

languages other than Spanish.

The BASE II project will terminate in 2004, and only a few additional funds are available for educational programs in the next funding cycle. Nevertheless, the BASE effort has been well regarded and has had a significant impact on the creation of a model-school system for use by the nation's normal schools and for in-service training activities. The Ministry has come to depend on BASE for the very few initiatives launched during the last seven years. BASE is administered by the Academy for Educational Development and Juarez Associates.

The USAID Mission's education team stressed the need to extend services for the Center of Excellence to Nicaragua where teaching conditions and instructional resources are among the poorest in the Western Hemisphere. The assessment team noted that teachers are paid lower in Nicaragua than any country other than Haiti, and that public-sector expenditures per student in primary schools are less than \$80 per year.

Among institutional resources, the team noted that the UNAN-León has garnered a good reputation for training students to serve as faculty in normal schools. Several of the normal schools served by BASE II have made significant improvements in programming, and throughout Nicaragua the physical plants of normal schools have been improved by grants from the government of Luxembourg.

The vice-minister noted that Nicaragua is in a state of crisis. The precipitous decline during the last year in the price of coffee has reduced export earnings by more than a half, and resulted in significant reductions in the MECD budget for the next year. The number of students entering the system and enrolled in primary schools has surpassed one million, and is expanding at an annual rate of more than 4 percent. Educational resources are at an all-time low; there are insufficient classrooms, materials and a growing shortage of teachers. Levels of teacher preparation are as low as at any time since the removal of the *Sandinistas*, while illiteracy rates are increasing, along with school dropout and desertion.

The only programs in support of educational innovation at the primary level are USAID's BASE II project and \$60 million in World Bank funds that are directed toward the creation and sustainment of community-controlled and -managed schools. MECD officials also noted that a donors' club is involved with extending IBE training in eastern Nicaragua and providing basic pedagogical training to the *empiricos* (teachers without formal teacher training), who comprise over 30 percent of the nation's teacher force.

With the pending change in the presidential administration in 2002, the present MECD will be removed from administrative duties in the coming months.

AMCHAM (American Chamber of Commerce) of Nicaragua is a private non-profit organization founded in 1974. It is comprised of 147 members, most of which are trans-national companies with a U.S. affiliation. The objectives of AMCHAM are to promote and encourage commercial relationships between U.S. and Nicaraguan companies,

competitiveness between Nicaraguan companies, and stimulate the social and economic development of Nicaragua.

The AMCHAM has several committees: Education, Mediation, Legislative, Tourism and Environment, and Friends of Police. The Education Committee initiated a school adoption program in 1999. The organization has benefited from consultancies from Georgetown University (Washington, DC) and the Alamo Community College District of San Antonio, Texas.

The organization does not have any experience as a direct provider of services in education. AMCHAM proposes to serve as a facilitator, promoter and coordinator to create a network of the various private-sector, governmental and educational organizations for the establishment of the Center for Excellence in Nicaragua. The organization is well connected to the private sector and educational organizations in the country. The organization might serve as an important resource to gather the support of the private sector in the country to help a Center of Excellence gain acceptance and to rally private sector participation.

Nicaragua has a new law, which grants a tax exemption to any company or corporation that donates money or resources to educational institutions and schools. AMCHAM could promote more private financial participation in the educational system by advocating the benefits of this new law.

The NGO EDUQUEMOS is the creation of several MECD personnel who left their posts after Humberto Belli was relieved as minister of education. EDUQUEMOS is affiliated with PREAL, and carries out research and policy assistance in support of educational reform. The organization is also affiliated with COSEP, the national chamber of commerce. The two entities are allied to promote better teaching practices and to conduct research in public education. The director observed that poor pay and equally poor teacher preparation were the principal causes for a low gross enrollment and intolerably high dropout rates.

V. Summary

The vast majority of primary schools are staffed with largely absentee teachers who are grossly underpaid and undertrained, students that systematically drop out in the first and second year and a support infrastructure that is limited to school construction. One-third of teachers have received no formal pedagogical training. The remaining two-thirds are trained only through the secondary level in normal schools often receiving poor quality instruction and resources.

At the other end of the spectrum, INCAE operates on a campus that reflects the institution's connections with Harvard and MIT. The institute has gained a reputation as one of the finest training institutions in the Americas, offering an MBA that cross-references with the Harvard Business School. Now that INCAE is bringing its substantial prestige and first-world management expertise to bear on primary education in the region,

it offers significant possibilities as a host institution for the Center of Excellence.

Nicaragua's teacher corps of 24,000 teachers is in drastic need of professional upgrading. It is questionable if teacher training alone will meet that need, since low salaries render the profession untenable from the standpoint of economic survival. Intolerable salary levels notwithstanding, primary teachers need professional development. More than 30 percent have not completed high (normal) school, and the majority of these *empiricos* teach in marginal zones of extreme poverty or multilingual areas.

Other than teachers who seek managerial positions in secondary schools or as MECD administrators, there are no post-normal school opportunities for skills enhancement. To the credit of USAID and other international contributors, several normal schools have substantially upgraded training programs. Since 1994, USAID has provided in-service teacher training for 20,000 primary-school teachers and administrators via a national network that has grown to 170 USAID-supported model schools.

These accomplishments merit replication and expansion. However, diminishing MECD resources will prevent broad-based implementation and sustainability. Given the downturn in export earnings and its negative impact on government receipts, it is unlikely that advances can be registered in Nicaragua's primary education system in the short and medium term.

PANAMA

I. Overview

The content and methodology of Panama's reading program is described in the Ministry of Education's teaching syllabus for the first grade of primary education in the chapter entitled, "Spanish Program for the First Grade of Basic General Education." The syllabus was developed and published in 2001 under the Education Development Project (PRODE) funded by IDB. It is therefore a brand new syllabus, and it is not clear how many schools are implementing it. Nevertheless the syllabus does contain the official mandate on reading development in the public schools of Panama.

The chapter on the first grade Spanish program contains four areas of study: a) oral verbal expression and communication; b) reading and writing; c) language structure; and d) literature. The chapter presents the learning objectives for each area, a list of contents, and suggested learning and evaluation activities. These areas comprise the four elements of the reading development strategy. The first area teaches and drills verbal communication and language enrichment skills. In the second area, students begin to read words and sentences and to reproduce them in writing. In the third area, children learn and practice basic spelling and grammar rules. The fourth area exposes children to reference and recreational texts, dramatizations, story telling, and poems. The column entitled, "Suggested Learning and Evaluation Activities," provides teachers with a variety of learning enhancement techniques such as choral reading, dramatizations, debates, games, songs, painting and drawing, role playing, mimics, etc.

There are no textbooks for teaching reading. In the school visited, we were told that teachers were expected to prepare their own materials and rely on classroom learning activities. The Ministry does not appear to have any textbook production plans. One of the main shortcomings of the school system is the lack of teaching materials. First grade teachers in the school visited were highly creative and showed us many attractive teaching aids and learning activities devised for the students, but clearly this is not sufficient for a consistently effectively learning.

Since 1999, the Ministry of Education has implemented the program, "We can read and write," at 113 single grade schools (*escuelas unigrado*) located in the 13 regions of the Ministry. The program, which benefits 40,000 children, is part of a regional initiative being developed in ten countries with the technical and financial cooperation of the Ministry of Education of Mexico, the CERLALC (Regional Center for Reading Promotion in Latin America and the Caribbean), the national governments, and a Mexican publishing house (Fondo de Cultura Económica). It provides textbooks and other didactic materials, organizes teacher training events, and provides technical assistance to improve reading and writing skills at the schools. The program has been a factor in a drop in illiteracy from 27 to 9 percent.

The main objective of this program is to develop a reading awareness in children. It offers new techniques to renovate reading teaching practices in classrooms, motivates

reading experiences, and offers tools and recommendations to determine policies for reading and writing. Teachers were trained in 1999 to become “animators and motivators” in reading.

This program has been implemented as a pilot in what are called demonstrator schools. These schools receive books for a small library, and teachers are trained in their use. The process has also renovated the former way of teaching reading; teachers are now using child-centered methodologies. Mention was made of the use of phonics and text comprehension.

The interest in pursuing excellence in reading prompted the Camara Panameña del Libro (the Panamanian Chamber of Books) to push for Ministry of Education involvement in the First Book Fair of Panama. The event was coordinated between the book chamber, an NGO called Casa Taller, the National Library’s NGO Pro Library Foundation, the Ministry of Education and other entities. The MOE considers this event a sound success. It took place during vacation time, and attendance more than met the expectations of everyone involved. Over 10,000 parents and children attended daily throughout the five-day session. Public schools participated, teachers were trained, children’s book authors did presentations and answered questions from the children, a Children’s Theater performed, and children wrote poetry and drew stories.

The book fair is considered a best practice in everyone’s opinion, so much so that planning is in process for a fair next year, and another in 2003, when Panama will celebrate its Centennial.

There are 2,805 public primary schools in Panama, of which 250 are urban, 2,088 rural, and 467 indigenous. Of the 1,072 preschools, 348 are urban, 595 rural and 129 indigenous.

More than 360,000 students are enrolled in Panama’s primary schools. Of these, about 155,000 attend urban schools, 157,000 attend rural schools and 49,000 indigenous schools.

The total population of Panamanian children of the preschool age (four to five years) is 125,000. The population of primary school-age children (six to 14 years) is about 522,000. (MOE Memoria 2000)

Students in Public Primary Schools 1998 – 2000

Level	1998	1999	2000
Preschool	30,616	40,671	39,973
Primary	343,717	349,017	355,220

(Source: MOE, Statistics Department)

Panama’s current literacy rate (for all people over ten years of age) is 92.4 percent. Literacy is slightly higher among men (92.9 percent) than among women (91.8 percent).

Illiteracy is a more significant problem among Panama's indigenous communities than in the country as a whole. It stands at 16.9 percent among the Bocas del Toro, 23 percent among the Darien, 38.5 percent among the Kuna Yala, 34.5 percent among the Emberá, and 45.9 percent among the NgöbeBuglé. For women in these communities, illiteracy is at 19.6 percent among the Bocas del Toro, 25.6 percent among the Darien, 48.5 percent among the Kuna Yala, 42.9 percent among the Emberá, and 55.3 percent among the NgöbeBuglé.

Panama does not have a national testing system, nor are any other measurements applied to evaluate the quality of the education system and student achievement. There was consensus among all interviewees, including Ministry officials, that this represents a major gap in the system that should be addressed soon. At the individual school level, we were informed that schools are required to conduct bimonthly tests on all subject areas.

During our visit to the Rogelio Sinan School in San Miguelito, teachers showed us their workbooks for first grade Spanish teaching. They operate a bimonthly curriculum planning system that includes evaluation of student progress from one semester to the next in mathematics. We were informed that this practice is followed by the ten schools belonging to the School Zone of San Miguelito. Teachers prepare bimonthly reports that include a review of a student's progress, results of meetings with parents, analyses of strengths and difficulties encountered, and plans to solve the problems during the upcoming semester.

We read some of these reports and were impressed with the level of detail of information and analysis provided. The reports indicate that the main problem is the shortage of work materials for the children. Parents are expected to purchase notebooks, pencils, erasers, pencil sharpeners, glue, etc. Reports repeatedly mention that children arrive in schools without sufficient amounts of these materials. The headmistress explained that the Ministry does not supply work material for the classrooms. Teachers and parents organize fundraising activities to purchase materials that headmistresses keep in storage to supply to children who arrive in school without them.

II. Teacher Training Needs

The main sources of teacher training are the Demostenes Arosem Normal School, located in Santiago in the Province of Turavia and the Faculty of Educational Sciences of the National University of Panama. It was not possible for the team to visit the Normal School because it would have taken two days to complete such a visit. Some information was obtained through interviews with former students. The Normal School is the oldest teacher training institution in the country and follows the traditional normal school pattern that has been discontinued in most Latin American countries.

The Demostenes Arosen Normal School provides instruction equivalent to a high school education. The school's entry requirement is completion of the sixth grade of primary education. Students follow a general education curriculum similar to a regular high school, as well as taking pedagogical training courses. The course of study lasts four

years, and students graduate with the title of *Bachiller Pedagógico*. This title qualifies them to teach first through sixth grade of primary education. We were informed that a large proportion of graduates enroll at the university to pursue tertiary-level education courses that enable them to climb higher on the employment ladder of the public school system.

Interestingly, during our visit to a primary school in the San Miguelito District, we found that only a minority of the teachers were Normal School graduates; most had some kind of university-level education. Ministry plans call for adding one more year to the training program of the school so as to expand the curriculum and qualify students for teaching in 7th through 9th grades. There is a general perception among interviewees that the Normal School offers a low standard of training, and that a considerable upgrade of its study program and a refurbishing of its facilities are necessary.

The National University of Panama, through its Faculty of Educational Sciences, is Panama's main provider of university-level pre-service training for education-sector professionals. The Faculty is perceived by Ministry officials and schoolteachers to be the leader in educational thinking and practice. One illustration of the Faculty's prestige among educators is the response it received to its continuing education diploma course, a seven-module in-service training course for teachers, which since its inception in 1999 has graduated over 4,500 teachers. The academic excellence of the staff and its skill in educational research was also acknowledged by several informants.

Recently, the IDB PRODE project commissioned a study on the evaluation of learning competencies that will generate an educational quality accreditation system. In addition to the central campus in Panama City, the University operates seven regional campuses across the country. The Faculty of Educational Sciences is present at each of the regional campuses. Thus the education and training provided is available nationwide. This Faculty's intellectual leadership in the educational sector is also illustrated by the Education Research Congress (Congreso de Investigación en el Aula), a yearly event that gathers together 400 to 500 educators to present and discuss research findings on several aspects of the education system. Our informants from the Faculty mentioned several research studies related to reading and reading readiness.

There are no specific courses on how to teach reading in schools. Faculty members interviewed informed us that this subject matter was covered in various ways in different courses—the main ones being reading and writing teaching methods and Spanish teaching methodology for the primary schools.

Several other subjects contribute to the development of reading readiness and mastering reading skills. Examples in the preschool training curriculum include: instruction of children's literature, learning evaluation in the classroom, and didactics of games and stories. Examples from the primary school training curriculum include: instruction planning for the classroom, didactics of recreation and game activities in primary schools, design and use of educational materials, and artistic expression in primary education.

The Faculty offers the degree of licentiate in educational sciences with an emphasis (major) in five different options: preschool education, primary education, psychopedagogy, educational research and evaluation, and administration of educational centers. To obtain the licentiate, the student has to successfully complete the three-year basic studies course (*Area Básica*). The basic studies course provides the academic and pedagogical foundation for the student to understand and function within the education system. Subjects include general culture, personal development, education philosophy, the school social context, and didactic intervention planning. After successful completion of the three-year basic studies course, the student follows with three semesters in the selected option. The preschool and primary education options are the most directly related to the subject matter of this report.

The Demostenes Arosemena Normal School is part of the Ministry's administrative structure. Thus the Ministry has authority over the design and review of its pre-service teacher training program. As part of the National University, The Faculty of Educational Sciences enjoys autonomous management in all aspects of its operations. Nevertheless the MOE and the Faculty claim to have close working relations and coordination of effort.

The Faculty reports that most of the pedagogical education courses include classroom observation, interviews with serving teachers, visiting lectures from schoolteachers and administrators, and school-based projects. In addition, the completion of the degree course requires a full semester of teaching practice under the guidance of a mentor teacher.

In-service training is not a structured educational activity that follows a given annual training plan. As soon as a person leaves *La Normal*, he or she will join a group of teachers (*maestros*) who will receive continuous training. Much of it is based on the needs of the individual and the school where he or she is teaching. This is why Ministry personnel refer to training as ongoing.

Some of these *maestros* train to become permanent teachers. Teachers coming out of the normal schools are not permanent and serve a probationary period of two years. Training offers them the possibility to become permanent staff members. Training is always optional, not obligatory.

On the other hand, the higher level of teachers, *profesores* (those who graduated from universities), will be motivated to train according to the subject matter offered and the amount of credits received for attending the training (usually from 11 to 14 points). There is a pay scale, and points are supposed to determine the pay scale, but it does not always function as such. Even when it does not, teachers attend anyway in order to obtain points that will allow them to compete for different positions.

The primary time for training is during vacation time. There are three vacation months, and in one of those months, by law, teachers are to receive training. Most new methodologies and content are taught at this time. And if there is a new interest in the

Ministry, such as the training of teachers for the reading program, *Podemos Leer y Escribir*, teachers will receive training on something specific, both didactic and methodological.

Ongoing training is conducted during teachers' free time during normal working days. Morning teachers train in the afternoon, and afternoon teachers train in the morning. This minimizes classroom disruption. When necessary, some teachers receive training on Saturdays and Sundays.

Panama does not practice massive teacher training. The National Department of Training usually hires trainers from a pool of teachers who are considered to have a high performance. They are selected for a training-of-trainers by the National Training Department and subsequently return to their school districts (or zones) to train the teachers there in cascade form.

Both the principal and teacher receive the same training. Sometimes the educational supervisor is included so that all know what has been taught and what should be applied in the classroom. This is the closest to a follow-up that exists. There is no significant follow-up to teacher training, nor is there a substantive performance appraisal of the teachers.

Some training is decentralized, and some is not. The Ministry is presently using the pilot demonstrative schools, which represent various zones, as teacher training centers. There can be as many as ten schools in a school zone. The Ministry hopes that eventually every school district will have its own training center. Four centers have already been built and 13 more are proposed, but private-sector funds are being sought to complete the project.

Training in school zones cuts down the cost of training. The Ministry of Education does not have the resources to train teachers for free. Therefore, all teachers pay for their training. Usually it is no more than a ten-dollar fee. Only recently, with World Bank assistance, have teachers been offered any free training.

Aside from the cascade method of training, teacher in-service training has been done via radio and has been successful, according to the Ministry.

The Ministry of Education admitted that evaluations of any training may be poor, because they are subjective and political party oriented. So there is no good measure of training's impact or effect. And with no follow-up, there is little indication of whether the imparted knowledge has been applied.

Having said this, teachers and everyone connected to teaching within the Ministry talked with interest about in-service training. There is a pervasive positive attitude about obtaining more knowledge and becoming better prepared to teach. There is a hunger for knowledge, and everyone is willing to do whatever it takes to better themselves.

The most apparent training needs are:

- Improved evaluation of student academic improvement, teacher performance appraisal, standardized testing, ACT testing, and measuring the overall quality of education;
- New and innovative reading methodologies that will enable children to learn how to read well, and improve teaching techniques as regards syntax, analysis, and comprehension;
- Strategies for training teachers to become animators and motivators of reading so that children will form the habit of reading;
- Discussions of how to use television as a medium to involve families in their children's education;
- A commitment to teaching values through literature;
- The development of indigenous literature and training in its use;
- Better computer-based training;
- The use of technology as a didactic tool;
- Stronger programs for English as a Second Language (By law, English will be taught in all grades in order to reach bilingual capability);
- Improved multigrade methodologies (74 percent of the schools in Panama are multigrade);
- A commitment to library science at teacher grade level;
- Multicultural workshops that incorporate storytelling; and
- Improved education for teachers on detecting learning disabilities and referring disadvantaged children.

III. Institutional Profiles

UNP (Universidad Nacional de Panama/ National University of Panama)

The Universidad Nacional de Panama (UNP) has a student body of about 3,000 and graduates an average of 300 students per year. The university is divided into seven departments—curriculum, didactic and technology, educational administration and supervision, educational development, psycho-pedagogy, educational and professional counseling, and educational research and evaluation. It has a staff of 113 professors, 64 of whom are full-time. All professors hold graduate degrees, including master's and Ph.D. degrees. Several are graduates of American and European universities.

UNP is the main provider of university-level training for primary school teachers in the country. It has no reading program as such, but the faculty includes professors with some reading development experience who have done research in this field. At present, the faculty does not conduct any training courses through distance learning. In the past, it experimented with radio-based education. It has not entered the Internet-based training world as yet.

The university claims to have close working relations with the Ministry of Education. Graduates from the faculty are considered fully qualified teachers and are eligible to be hired by the Ministry. The university is the main source of education research for the

Ministry. The Ministry is represented on the board of the university and on various advisory committees. Public schools serve as venues for teaching practice by faculty students and schoolteachers serve as mentors of the student teachers. The Ministry gives continuing education points to students who complete in-service training courses organized by the faculty.

The faculty runs a continuing education program for in-service teachers. The program is funded by the government.

The faculty building is fairly new and well maintained. Office and classroom furniture appears in good condition. Classrooms seem spacious, well lit and ventilated. The library contains good, comfortable working space and appears well stocked on books, journals and other documents. It also seems to be well used by students and faculty. The university is very interested in hosting the Center of Excellence.

El Ciudad del Saber/ City of Knowledge

The City of Knowledge was formed after the United States government donated all infrastructure and land to the Panamanian government at the turn over of the Canal Zone. This area, now called the Reverted Zone, houses international academic institutions, software developers, companies in telecommunication services, e-commerce, digital libraries, videoconferencing and research labs. It is also in the process of refurbishing a building with distance-learning technology for student and teacher training.

The distance learning center is still being remodeled and will be called an Intelligent Center of high technology. The building will house a room for videoconferencing with capacity for 50 people. It will have access to global educational and research networks, and circuits in distance learning. The center will also offer interaction via video between students and professors and access to technological information from different institutional sources.

The “smart classroom” will have multimedia capacity for 50 people and permit the accessing of courses via the Internet. It will include space for group work, as well as areas for computer-based training.

The center will also hold an area for a laboratory to produce multimedia, a laboratory for virtual bibliographies, and an administrative area as support to all the services.

International technology is the key to the City of Knowledge. Panama has a unique geographic location that makes it attractive to worldwide data communication businesses. Among the most attractive assets is its undersea fiberoptic cables—Pan American, Global Crossing, Maya, Project Oxygen, Arcos, and others have installed them. The convergence of these cables gives Panama unprecedented capacity and cost-effectiveness of communications for the isthmus. The list of companies and academic institutions as well as international agencies clustering at the City of Knowledge reads like a Who’s Who list of institutions. UNICEF has announced it will close its offices in Bogota and install in the

City of Knowledge. Already housed there are the Organization of American States, the Spanish Agency for International Cooperation, the United Nations Environmental Program, Cornell University, McGill University, Florida State University with its Florida Institute of Technology, and the Smithsonian Tropical Research Institute.

This institution is not a university, but a village that houses a cluster of institutions from international universities to small technological business incubators. It is very interested in hosting the Center of Excellence. To use the administrators' words, "This city was built for that concept."

The site encompasses 100 acres of land intertwined with many buildings that will be used as residence halls for students, visiting professors and scientists, and businessmen. It is like the Silicon Valley of knowledge.

It has the technological capacity to provide the most innovative technology for distance learning, with a virtual classroom. Its fiberoptic capability offers Internet access at no cost to the students. Its software design offices are presently working on a distance-learning package for the Ministry of Education for teacher training.

IV. Country Capacity

Education technology in Panama is available at the Ministry of Education, the University of Technology (UTP), the National Library, the City of Knowledge, and at private institutes and NGOs that teach computer literacy.

The Ministry of Education, with funds from the World Bank and IDB, is installing and equipping 27 centers throughout the country with computers that will have access to the Internet. The intent is to build 110, but of the existing 27 centers, 13 are pilot projects with computer laboratories, data software, overheads, televisions, radio, science labs and libraries. The Ministry stated that the 13 centers are now operative. However, in an interview with a Peace Corps officer, the Phase I team learned that the equipment in the rural areas has not been completely connected and the people in charge desperately need computer training.

Distance learning programs have been developed for radio and television, with the most effective being radio. Television programs are geared toward secondary teachers and students, with funds and technical assistance from Mexico, such as in the program Telesecundaria.

The World Bank has funded the radio program that offers support to families and the community in its role as educators of their children, focusing on preschool (ages four and five). Cassettes were given to supervisors at the preschool level in Chiriqui and Bocas del Toro (two remote rural areas) to be used for training as a training-of-trainers for educational supervisors. In all, there were 40 radio programs. The program is called, "La Familia Amaya y su Sabia Guacamaya" (The Amaya Family and their Wise Guacamaya). Using this radio material, 250 workshops were carried out with new promoters, such as

“mother animators.” The World Bank provided 3,000 90-minute cassettes to record the program and distribute to nonformal educators. The program is heard on local radio stations at different hours of the day.

The Ministry of Education has had the foresight to align itself with several government and private entities to better its educational system. One of these especially related to reading programs is the alliance with the National Library. The National Library has installed throughout its regional libraries what it calls Infoplazas.

On April 28, 2000, an agreement was signed to form the Foundation of Infoplazas. This foundation was to coordinate its efforts with the National Secretariat of Science and Technology (SENACYT). Thereafter, Infoplazas were established in the provinces of Colon, Herrera, Panama and Chiriqui. The SENACYT supplied six computers to each site, with structured cable, software, and communication costs for two years, as well as other communication equipment, training of personnel, technical assistance and furniture.

Monies were given to the Fondo de Inversion Social (FIS) to remodel the rural sites. At the Chitre Library between June and December of 2000, 4,128 students and adults made use of the site. The library in Dolega was to have opened its doors in March 2001 and the Icaza Infoplaza in February of 2001. Many others are still in the process of remodeling and installation.

Most importantly, Cable & Wireless, one of the country’s largest communication companies negotiated with SENACYT to install the Frame Relay at all the Infoplazas so that all the National Library installations could benefit by the technology and be able to connect on-line to their catalog without additional cost.

Though not educational per se, the MOE has been institutionally strengthened with a general information system with World Bank funds. There is a connection to the Wan Net so that information can be relayed to all regional departments. E-mail capacity was installed for all regional department heads of San Miguelito, West Panama, Chiriqui, Colon, Veraguas and Herrera. They directly connect to the Web, and have FTP and Internet service.

The University of Technology of Panama is at the forefront of education technology among Panamanian universities. Initially the university tackled courses on a vocational scale. Since its inception, the university has grown from six courses to 30 and now offers 69 degrees from technical certification to bachelor’s and master’s degrees and a graduate degree in instructional technology in order to introduce technology at the curriculum level.

The department of distance learning is in the form of a virtual classroom, via the Internet. There are eight centers in rural areas where students of low economic means who reached high school and now pursue junior college and/or the Panama Network (called Pananet) are being prepared to enter the university. Presently, there are 16,000 students in the

system. Only 2,000 are able to enter annually (out of 8,000 who apply) due to the university's capacity.

The university has embarked on a new initiative in the area of teacher training. By using the existing televisions from a previous project on health, it decided to use videos to train teachers in computer literacy. The university presented its idea to the Ministry. The Ministry was pleased, accepted the project, and the university is now waiting to hear from the European Community for its funding. The university was able to obtain a donation from the Motorola Company (\$20,000 for materials) and the Japanese Embassy (equipment for 12 schools that did not have any access to energy).

Presently, the university has agreed to propel what is called the Smart Classroom. The software that it is designing will be able to multiply its effect in eight classrooms at once. The purpose is to use various media in order to speed up the educational process. It was noted that this particular software could be used to train elementary teachers as well.

UTP is also involved in an agreement with Microsoft to use the Microsoft Solution Developer which offers free courses to advanced students. The idea is to train bright students on highly technical systems and ask the companies for which they will be working to donate \$2,000 each to the university. It is felt that the value-added education is well worth the investment.

Another alliance is with Cisco Systems to offer courses at the national level. UTP has also formed a consortium with the University of Arizona and the Florida Institute of Technology to offer five careers in aviation. The idea is to make UTP and its center in Howard (Canal Zone/Reverted Area) the primary aviation institution for all of Latin America.

There are three other areas of interest for the university as it plans its future programs. One is offering special programs to develop more technological skills in teachers of all grades. It plans to work closely with the Technical Institute of Mexico and it has established rapport with the MOE. The second is developing the National Laboratory for testing earth tremors. And third, UTP plans to finish developing the ALTECH data hosting service. In the Reverted Zone, five fiberoptic cables were left for use. Utilizing this connectivity, the UTP plans to buy one of the buildings on sale in the area and install 100,000 servers in order to backup information for the public and private sectors.

The National Library has also been involved in education technology and is coordinating efforts with the Ministry of Education to foster reading programs to children at all grade levels. Though not considered "technology" as such, the National Library has been offered a mobile unit by UNESCO in order to provide a mobile library to distant areas where access to Infoplazas is unavailable. This mobile unit, expected to arrive this month, will be equipped with a wide range of children's literature and will have a reading animator. This individual will ride to each area every two weeks.

Once at the given site, the animator will do reading workshops with area children and motivate their interest in reading. Children will be able to take out books at this time. When the mobile unit returns, they will return the ones in their possession and take out other books. The National Library currently operates with only one mobile unit and one animator. It feels challenged to find the funds to pay for the constant use of gasoline and the animator's fees. If the Library is able to maintain the mobile unit for six months, UNESCO has promised to donate another mobile unit.

Private institutes and NGOs play a minor role in developing programs or technological capacity, but are involved in the process in one way or another. The NGO Fe y Alegría, for example, is trying to keep up with the demand on technology and has set up some centers in the rural areas for children 14 years and older.

The private institutes in the city of Panama are primarily local institutes that offer student and adult computer literacy.

Two sections of the Ministry of Education are specifically charged with dealing with students with special needs: the Special Education Division and the Indigenous Education Unit. In addition, all of MOE's units are expected to consider the needs of these children in their own programs and areas of responsibility. The Special Education Division deals with the learning needs of children with physical impairments and learning handicaps including blindness, deafness, physical disability, speech impediments, dyslexia, ADD, etc. The operating principle is to integrate these children in the larger school community and not to segregate them. The Special Education Division coordinates closely with the Teacher Training Division to arrange training courses to prepare children to deal with children with special needs.

The Indigenous Education Unit (Unidad de Educación Indígena) is concerned with the educational needs of children in the indigenous communities aiming at preserving their language and cultural traditions. The coordinator of this unit (himself a member of an indigenous community) admitted to many limitations in the Ministry's services to the communities.

During our visit to the Rogelio Sinan School, teachers informed us that the headmistress and experienced teachers provided them with advice on how to deal with children with learning disorders and behavioral problems. If a more serious problem or handicap is detected, children are referred to the school district child psychologist and/or counselors. We were informed that all school districts are supposed to have child psychologists and counselors, but were not able to confirm this information.

The Ministry of Education has an Indigenous Education Unit. The indigenous community demands that education should be bilingual, leaving Spanish as the second language. The Constitution guarantees the right to bilingual usage, but only recently has this right been emphasized. Because of the low level of education in the indigenous regions, the Ministry of Education has proposed that its national teaching institution, *La Normal*, offer a curriculum to the indigenous teacher population in their mother tongue.

The trauma of children who attend school and do not understand the teacher speaking in Spanish is common. With IDB support, development of texts and other educational materials using all six indigenous languages (Gnobe, Kuna, Embera, Bugle, Wwaunan and Teribe) are underway for 1st through 6th grades. Under the coordination of the Spanish Agency for International Cooperation and the IDB, there is a project to bring to light indigenous literature. Before there is a widespread usage of these books, however, workshops are held to make teachers aware of the need for bilingual education. This is not to confuse the effort with a bilingual push nationwide for all Panamanians to speak English.

The European Community is promoting equity, and in coordination with the MOE, it is participating in the literacy of indigenous women of all ages. The effort is taking place in 60 indigenous communities with special booklets written in three indigenous languages.

The Ministry of Education began a ten-year reform of its educational system with the aid of the World Bank and IDB. One of the objectives was to offer educational assistance to children ages four and five in communities of dire poverty, as well as in inaccessible areas. Parents have been involved in the education of their children so that this objective can be reached.

The Family and Community Centers for Preschools (Centros Familiares y Comunitarios de Educación Inicial, CEFACEI) offer nonformal education at its best. There are presently 252 CEFACEIs nationwide, benefiting over 6,250 children and 6,000 parents through the Family Orientation Program.

The program, which began in 1997, practices a well-developed methodology. First, the community promoters and parents are trained in early childhood development. Next, presidents of the Administrative Committee for Parents of the CEFACEI are also trained. After the 15-day workshop, parents receive one week of training a month, and then periodically they are visited and offered more technical support by the MOE's regional technicians. CEFACEIs are in homes, churches, community houses—wherever a group of children from 25 to as many as 50 can gather and learn. All of these centers were established in the provinces of Chiriqui, Veraguas, Cocle, Los Santos, Herrera, Kuna Yala, Panama City, Panama East, Panama West and San Miguelito.

The objective of the Mother-to-Mother program is to bring about awareness to communities in distant areas of how to treat children younger than six years old. Nutrition, basic child rearing, and health standards are taught (Colgate Palmolive donated school kits with toothpaste and toothbrushes). The program has taught over 116 motivating mothers (*Madres Motivadoras*) in all the above areas including Bocas del Toro. These facilitators have taught 1,740 mothers, and by doing so have benefited 5,220 children younger than 6 years old, in 185 districts of extreme poverty. In its five years of development, the program hopes to train 300 motivating mothers and 4,500 mothers, and to benefit 13,500 children.

During our interview Luis López, President of the Association of Independent Teachers (AMIA), noted that AMIA is by far the largest teachers' union in Panama. Its members are primary school teachers serving in public schools. There are separate unions for high school teachers (Asociación de Profesores de la República) and for private school teachers. AMIA's current membership is over 15,000 teachers, who constitute more than 90 percent of the primary school teachers serving in public schools. The union has provincial branches in nine provinces and in four indigenous communities. AMIA is the Panamanian constituent member of the World Confederation of Organization of the Teaching Profession (WCOTP), the world largest teachers' union. AMIA has close working relations with fellow unions throughout Latin America. Luis López indicated that they have regular working meetings with other Central American unions, either on a subregional or on a country-to-country level.

Luis López informed us that the union was interested in teachers' rights, working conditions and salaries, and on improving the quality of education. He reported that the union enjoys a good working relation with the MOE and that Panamanian teachers enjoyed better salaries than teachers in other countries. (We can not verify this assertion.) According to Mr. López, the lowest salary paid to a teacher (Category A-1, with no teaching qualification) is US \$350. This salary increases to US \$390 for Category B-1 teachers, i.e., those with normal school certificates.

AMIA is a frequent participant in education policy debate in the country. At present they are active participants in the national education dialogue that is currently in progress under the facilitation of the UNDP. Mr. López indicated that teachers are highly motivated in pursuing higher education and training, and that large numbers of teachers are pursuing higher degrees. He expressed enthusiastic support for the Center of Excellence initiative.

The Panamanian educational system has been in a process of change. Since 1995, the system has been undergoing reform in order to improve its statistics of desertion, inaccessibility, poor teaching, dilapidated infrastructure, and alarming illiteracy rates for rural inhabitants and the indigenous poor.

On July 6, 1995, the Legislative Assembly approved Law 34 and reformed Law 46 of 1946. It restructured the educational system in order to embrace the modernization that was engulfing all Central American nations. In 1997, the country set out on a ten-year plan called "The Decade of Modernization of Panamanian Education." To fund the project, the government sought the aid of the World Bank for a loan of \$58 million, and borrowed \$73 million from the IDB.

The project was designed to improve the quality of basic education, improve equity of access to preschool and basic education for children in rural and poor urban areas, and expand the coverage of preschool education through community-operated nonformal educational models.

The new reading programs, such as *Podemos Leer y Escribir* (We can read and write) and *Rincones de Lectura* (Reading Corners), and coordination with the organizers of the book fair have strengthened reading awareness. However, it was felt that more could be done, especially in teaching methodologies for reading readiness. Teachers mentioned that the use of child-centered methodologies were good, but not enough. Teachers refer to this as the constructivist methodology. Others, such as the NGO Casa Taller, are creative and innovative in their approach, but do not teach how to read.

Panama is currently engaged in a national debate on education reform involving participants from all sectors of the society—the National Dialogue on Education Reform. The dialogue is being facilitated by the UNDP. It is expected that the reform process will impact all aspects of the educational system, including the reading program.

Even prior to the current effort, some reforms had been introduced. Under PRODE, the IDB project, a revised curriculum is being introduced in primary education. The syllabi for the first six grades have been completed and introduced in the schools. The syllabus for the 1st grade Spanish described above presents the approach to reading development in the schools. Second and third grade syllabi reinforces reading acquisition. It remains to be seen what impact these reforms will have on the quality of classroom instruction in general and reading in particular.

Most people outside the education sector did not have anything positive to say about education in their country. Particularly vehement was the private sector. The American Chamber of Commerce felt that large student populations per classroom pose a major problem. Class sizes range from 26 to 30 students at best. The lack of government focus and ill-trained teachers were another problem. According to the Chamber, if the Ministry's hold on education decreased and business funds were focused in the right place, businesses would be eager to help, especially those businesses that gross over \$15 million a year.

The Panamanian business sector complained that the government makes statements and decisions about education without really conducting any conclusive studies. The Asociación Panamaniana Educativa de Empresarios (APEDE) strongly indicated that the Ministry of Education should never make evaluations of the educational system, arguing that it is a poor planner and is very party oriented. APEDE would prefer that an outside entity conduct an evaluation of the system that starts at individual schools and goes all the way up to the official Ministry levels. The indication is that many quantitative studies are made, but no qualitative studies are released. They also felt that the Panamanian law had too many vested interests, and that it was not a dynamic law that relied on feedback in order to pursue quality. Since 1980, educational reform has stagnated.

University administrators also made negative remarks about Panamanian education. They had a very low opinion of the teacher training taking place, both pre-service and in-service. And when mention was made of pre-service, they referred only to the education of teachers coming from the National Teachers College, *La Normal*. The general feeling

is that anyone graduating at what is essentially a high school level should not be allowed to become a teacher until he/she pursues further studies.

Ministry officials and *técnicos* painted a bright picture of the extensive in-service teacher training going on. As far as they were concerned, the fact that teachers needed training was a given, and they were maximizing efforts to fill the educational gap.

The school administrators and teachers both felt that most teachers' academic level was good. Everyone acknowledged that coming out of the normal school was simply not enough. But, they felt that with the Ministry offering all sorts of different training venues, they were able to raise their level of education and feel better prepared to teach. It was very self-evident that teachers were enthusiastic about receiving training or doing course work. The overall agreement was that teachers needed better pre- and in-service training.

The network that the National Library has with schools and Infoplazas is starting to take small steps to alleviate the lack of books in schools and communities. Few schools have libraries. Many interviewees mentioned that Panama does not have a culture of reading and that present efforts will bear fruit years from now.

The National Library receives book donations from other countries everyday. Most of the books received are for children. Between the provincial book carts, the soon-to-be operational bookmobile, the Infoplazas and other centers, Panama is moving in the right reading direction.

The business sector's perception of the quality of public education in Panama has already been discussed. However, the APEDE was more concise in stating the specific needs and weaknesses.

1995 was the first year in which the private sector became involved in the educational development of the country. An Annual Commission of Executives (CADE) was formed, and it presented areas of weakness to the Ministry of Education. Since then, the private sector has taken a stand on the theme of poor or nonexistent evaluations. Not only is it calling for a neutral instrument to evaluate MOE, but to evaluate schools as well. The concern is that a school should be evaluated as a whole, from implementation of its curriculum, to its teachers, students and institution.

The private sector also feels that the lack of quality prevents systemic use, cognitive analysis, and knowledge of how to study. According to them, this is why students failed.

But even though it has been critical of the educational process, the private sector has been involved not only as a judge of the education, but by donating everything from toilets to computers. It is, however, reluctant to fund projects or schools where businesses have no say.

Fe y Alegría is an international NGO that can be found in almost every Latin American country. In Panama, it is oriented towards young, at-risk adolescents aged 14 to 17 years.

The focus is primarily vocational, but the organization has also seen a need to offer remedial courses in reading and mathematics.

Casa Taller is another NGO that works in conjunction with Camara Pananamenia del Libro to motivate children to read by conducting workshops that teach children to be open and imaginative. In collaboration with municipalities, this NGO offers workshops in the Torre de Marfil, which is a concept in teaching children about their city and citizenship. At the First Book Fair, Casa Taller conducted workshops for 4,733 children in five days. Through this NGO's initiative and in collaboration with Camara Panameña del Libro, Panama now participates in the network of educating cities, which hosts an international convention in Barcelona this October.

The World Bank's program in basic education has already been discussed. But there are two other international entities that are involved with education. One of them is the US Embassy, headed under the office of the Cultural Attaché, which is backing the country's efforts in learning English as a second language. A local US reading specialist has been hired to design and train teachers from the Ministry in how to teach English. This is also in collaboration with England and its LEDES program with the same objective.

The second international entity is Peace Corps, which does not have an education project per se, but does teach the people with whom it comes into contact. Some volunteers in indigenous areas have opened their homes as local libraries, and are teaching children and adults how to read. Though this was not their primary objective, the volunteers felt the need was important and should be met. Volunteers are also teaching indigenous groups how to use computers, especially those installed in the Infoplazas, because there is a lack of computer-competent personnel.

Panama is amazingly well connected. From the local use of cellular phones to the high technology observed in the various institutions, there is easy access to technology throughout the country. From bellboys to office personnel, the population has a large computer competency.

V. Summary

The City of Knowledge, a non-profit NGO, is the institution most qualified to house the Center of Excellence. Aside from its highly technological qualifications, the City of Knowledge, like most of the institutions in Panama, has learned to work well with other institutions. It has no animosity towards any other institution. It is apolitical and private—a decided plus. The City of Knowledge has agreements with the Ministry of Education and has a working relationship with the private sector, the National Library, international donors, consortiums of international and national universities, and other NGOs.

This NGO has the capacity to execute and implement a project as well as simply administer the village. It is a consortium of knowledge that puts at our fingertips all the tools needed to make the Center of Excellence strategically sound and cost effective. It

has the space to receive visitors, the capacity to produce materials, and the know-how to execute distance training using radio, television, computers, the Internet, and videoconferencing and to provide wireless technology. WorldCom just signed a contract to install its headquarters on-site.

But more importantly, its directors and managers have the will, the interest and the intellectual capacity to make the Center truly excellent.

The wide gap between Panama's privileged and disadvantaged populations is apparent in its educational population. All institutions and individuals agreed that the Center of Excellence concept was sorely needed for the country and for Latin America as a whole. It was a consensus opinion that reading was of foremost importance if Panama is to move into 21st century modernization.

Ministry of Education officials were excited about the prospect of the Center of Excellence being located in Panama. They felt that their country has the technological capability and the will to forge ahead and make the project succeed.

The private sector welcomed the initiative and offered to help in whatever way possible as long as the project did not become politicized and fall under the exclusive control of the Ministry of Education. If they are to fund part of the Center or assist in any way, business leaders want to be party to the decisions and an active stakeholder.

All of the visited donor agencies were also interested and welcomed the initiative. They felt that it would respond to a definite need.

The universities were equally interested, especially the University of Technology, which saw this program as an opportunity to address a need. Teachers also were pleased to be considered in the project. Many spoke of the opportunity that this project would afford them, by providing more accessible training at a lower cost. Teachers in the elementary grades were particularly interested in the new methodologies regarding teaching reading readiness.